

FEDERAL CIVIL DEFENSE ADMINISTRATION
NATIONAL HEADQUARTERS
BATTLE CREEK, MICHIGAN

OFFICE OF THE ADMINISTRATOR

APR 16 1957

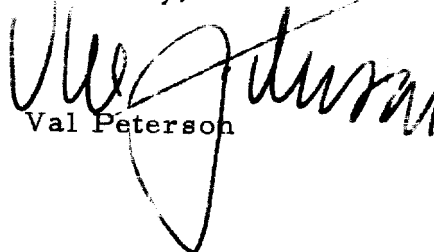
Honorable Allen W. Dulles
Director of Central Intelligence
Washington 25, D. C.

Dear Mr. Dulles:

Enclosed is a copy of our Annual Report for 1956. In conformity with most other Government operations, this Report is for the fiscal year. Previous reports have been on a calendar year basis.

I am grateful for the increased interest and participation of Federal Departments and Agencies in civil defense.

Sincerely,



Val Peterson

Enclosure

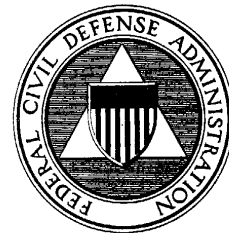
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Annual Report

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Annual Report *for* Fiscal Year 1956



FEDERAL CIVIL DEFENSE ADMINISTRATION

UNITED STATES GOVERNMENT PRINTING OFFICE: 1955

LETTER OF TRANSMITTAL

The Honorable, The President of the United States.
The Honorable, The President of the Senate.
The Honorable, The Speaker of the House.

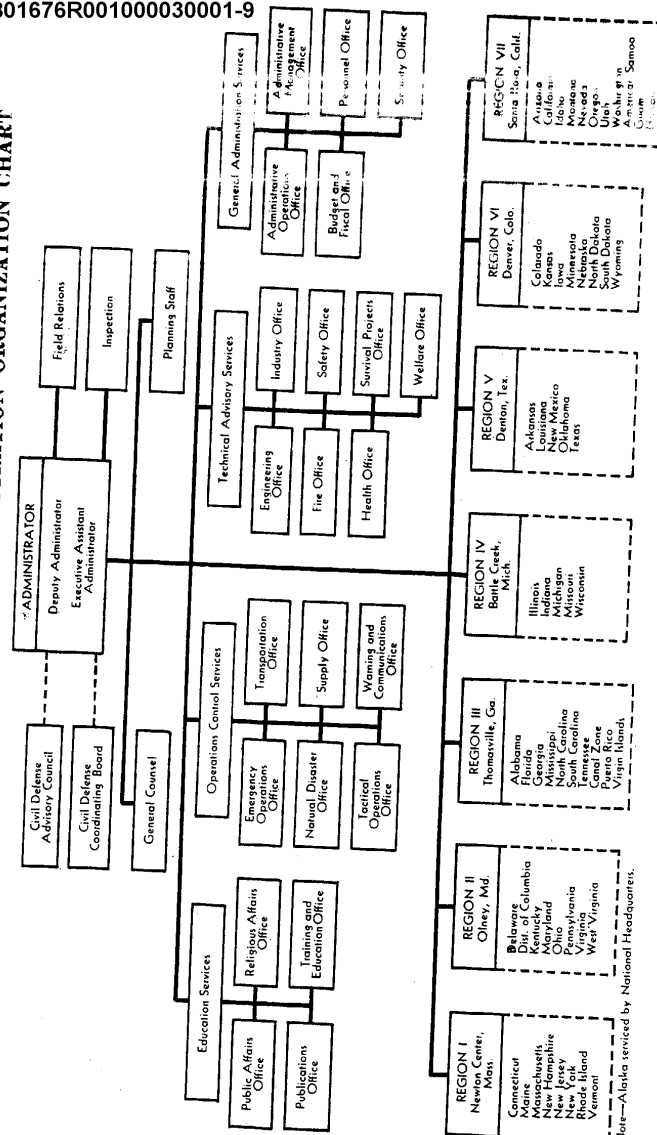
I have the honor of transmitting to you the Sixth Annual Report of the Federal Civil Defense Administration. This report is submitted in conformity with section 406, Public Law 920, of the 81st Congress.

Respectfully,

VAL PETERSON,
Administrator.

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FIGURE 1—FEDERAL CIVIL DEFENSE ADMINISTRATION ORGANIZATION CHART



Note—Alaska served by National Headquarters.

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INTRODUCTION

The Federal Civil Defense Administration was created by the Federal Civil Defense Act of 1950, Public Law 920, passed January 12, 1951, by the 81st Congress.

Principal responsibilities of the Administrator under this Act are to:

- Prepare national civil defense plans and programs.
- Delegate appropriate civil defense responsibilities to other Federal agencies.
- Provide for necessary communications and warning systems.
- Develop civil defense measures to protect life and property.
- Train people in civil defense organization, operations, and techniques.
- Disseminate appropriate civil defense information to the public.
- Encourage the States to enter into interstate civil defense compacts.
- Procure civil defense materials and facilities.
- Make available Federal funds to the States, on a matching basis, for civil defense programs approved by the Administrator.

This annual report shows in summary form the progress made in several aspects of civil defense and particularly in the programs carried on directly by FCDA.

ADMINISTRATOR'S REPORT

Fiscal year 1956 was a year of considerable progress for the Federal Civil Defense Administration. Reports on the accomplishments and progress of our various services and in our many fields of activity are detailed in the body of this annual report and I will make no attempt to summarize them in this brief foreword.

Rather, I prefer to devote this space to a discussion of a different kind of development and progress, and a look into our needs of the future.

It was clear at the close of fiscal year 1956 that civil defense had won greater acceptance. Americans appeared to have recognized that civil defense has become a permanent part of our way of life. Even more important, there appeared to be agreement that it was necessary to improve civil defense, as an indispensable and urgently needed defensive weapon in the event this Nation should ever be attacked, and as a force, which if known to be capable of fulfilling its assigned task, would deter a potential aggressor from risking an attack.

Development of new and more destructive weapons was accompanied by recognition of the need for an updating—a modernization—of the Federal Civil Defense Law which was written before the advent of the hydrogen bomb, and before the intercontinental ballistic missile loomed on the horizon.

In the letter which President Eisenhower addressed to me on July 17, 1956, the President pointed out that our whole civil defense effort needs “both strengthening and modernizing.” He added: “It is evident that the exigencies of the present threat require vesting in the Federal Government a larger responsibility in our national plan of civil defense.”

The President made specific recommendations in connection with revision of the Federal Civil Defense Law. He declared: “Plans to meet postattack situations are, of course, essential, but the Federal Civil Defense Administration needs authority to carry out necessary preattack preparations as well. It must be enabled to assure adequate participation in the civil defense program. It must be empowered to work out logical plans for possible target areas which overlap State and municipal boundaries. It must have an organization capable of discharging these increased responsibilities. Moreover, the prestige and effectiveness of the Federal Civil Defense Administration must be equal to the heavy responsibility it holds.”

We in FCDA are giving continuing study to ways and means of accomplishing this modernization of civil defense law to make possible the strengthening of civil defense organizations on all levels.

It is important however, that we avoid Federal preemption of all civil defense programs which are dependent upon widespread civilian participation. The Federal Government cannot give the Nation civil defense. As President Eisenhower has pointed out, should an emergency occur, our Nation's survival may be dependent upon the way each of us responds to his duty. In an area attacked, survival will initially rest mainly with the individual and the community.

That is why, in all our planning, we stress a partnership between the Federal Government, States, cities, and towns. During fiscal year 1956, FCDA developed closer cooperation with the States than ever before. Each program, each new decision affecting major policy, was discussed in advance with State civil defense directors. We look forward to an intensification of this program next year.

The basic concept of civil defense remained unchanged during fiscal year 1956. Our concept—as it has been since the recognition of the fallout danger—is a balanced program of evacuation and shelter. Changing conditions may dictate from time to time that greater stress be placed on one or the other of these defense methods. However, neither by itself can be advanced as a complete solution. The

proper combination of the two programs still holds the best hope for saving lives.

CIVIL DEFENSE COORDINATING BOARD

The Civil Defense Coordinating Board was established by Executive Order 10611 on May 11, 1955.

The Board is composed of the Administrator of FCDA, who is the Chairman of the Board, and 17 other members.

The functions of the Board are:

- a. To assist in the development of a plan for the participation of all Federal departments and agencies in the civil defense of the Nation.
- b. To recommend to the President specific arrangements for civil defense responsibilities to be assumed by various Government departments and agencies.
- c. To facilitate such arrangements with the Department of Defense and the Office of Defense Mobilization.
- d. To advise the President of the progress of the plan.

The first special meeting of the Board was held in Washington, on August 2, 1955. Members of delegate agencies discussed allocation of \$1,500,000 appropriated by Congress to FCDA for distribution to the delegate agencies.

The third regular meeting was held in Washington, on September 12, 1955. Civil defense progress, deficiencies, and recommendations for the future were discussed. The fourth, fifth, and sixth regular meetings were held on October 11, November 10, and December 20, 1955. Agency opinions were discussed and an agreement reached on FCDA's initial proposals of the Agency legislative program to be submitted to the Cabinet. Other subjects discussed were integration of civil defense into all departments and agencies of the Federal Government, Operation Alert 1956, and FCDA survival studies.

On March 27, 1956, Board members met in Battle Creek, Mich., for an all-day briefing and discussion of the civil defense program. On May 22, 1956, a meeting was held in Washington to discuss plans for Operation Alert, to review a paper proposing a Federal financial policy for emergencies and a paper establishing a tentative timetable for civil defense planning.

CIVIL DEFENSE SCIENTIFIC ADVISORY COMMITTEE

The Civil Defense Scientific Advisory Committee, composed of leading scientists in a variety of fields, was formed by the National Academy of Sciences at the request of FCDA. The members of the committee serve without pay, and the committee advises the agency

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on technical and scientific problems. During fiscal year 1956, the travel and administrative expenses incurred by the committee were financed through research funds.

Dr. Merle Tuve, physicist, Department of Terrestrial Magnetism, Carnegie Institution, Washington, D. C., is chairman of the committee. Other members of the committee are:

Mr. Willard Bascom, technical director, research engineer on leave from the University of California.

Mr. Gerhard D. Bleicken, attorney, John Hancock Mutual Life Insurance Co.

Dr. Herbert M. Bosch, sanitary engineer, professor, University of Minnesota.

Dean David Cavers, attorney, associate dean, Harvard University Law School.

Dr. Eugene P. Cronkite, physician and hematologist, Brookhaven National Laboratory.

Dr. Richard M. Emberson, physicist, Associated Universities, Inc.

Mr. E. H. Holmes, highway engineer, United States Bureau of Public Roads.

Dr. Rensis Likert, sociologist, director of the Institute for Social Research, University of Michigan.

Dr. R. B. Roberts, physicist, Department of Terrestrial Magnetism, Carnegie Institution, Washington, D. C.

Dr. Herbert Scoville, Jr., physicist, Armed Forces Special Weapons Project, Department of Defense.

Dr. Lauriston S. Taylor, physicist, chief, Division of Atomic and Radiation Physics, National Bureau of Standards.

Meetings were held on July 15 and December 20, 1955, at the Dupont Circle Building, Washington, D. C. In addition there were numerous meetings of panels of the committee established to consider specific questions.

Committee recommendations are communicated to the FCDA in written reports, in memoranda from the chairman or technical director, and in oral briefings by the technical director.

During fiscal year 1956 the following reports were made by the committee:

Recommended Research Program for Civil Defense. July.

Revision of Proposed Evacuation-Shelter Policy. November.

Report on Civil Defense in Arlington Public Schools. September.

Report on Operation Green Light, Portland, Oreg. September.

Report on Washington, D. C., Warning System. October.

Legal Measures to Provide a Civil Defense in West Germany.

April.

Federal Civil Defense Legislation. April.

Civil Defense Against Great Fires. June.

NATIONAL CIVIL DEFENSE ADVISORY COUNCIL

During 1956, 3 new members were appointed to the 12-member National Civil Defense Advisory Council replacing members whose terms had expired, and 4 were reappointed.

At the close of the year the following were members:

Hon. Arthur B. Langlie, Governor of Washington

Hon. Goodwin J. Knight, Governor of California (new member)

Hon. Allen B. Shivers, Governor of Texas (new member)

Hon. John B. Hynes, Mayor of Boston (new member)

Hon. Albert E. Cobo, Mayor of Detroit (reappointed)

Hon. Clifford E. Rishell, Mayor of Oakland, Calif. (reappointed)

Mrs. Katherine G. Howard, Boston, Mass. (reappointed)

Mrs. Charles W. Weis, Jr., Rochester, N. Y. (reappointed)

Gordon Dean, former Chairman of the Atomic Energy Commission

Gen. Otto L. Nelson, Vice President of New York Life Insurance Co.

Hon. Okey L. Patteson, former Governor of West Virginia

George J. Richardson, Secretary-Treasurer, International Association of Fire Fighters, American Federation of Labor

During fiscal year 1956, the Council met twice. Meetings were held at Omaha, Nebr., headquarters of the Strategic Air Command and at Battle Creek, Mich., FCDA Headquarters.

At the Omaha meeting the Council discussed the FCDA survival plan program, and a paper prepared for the President by FCDA concerning civil defense deficiencies and recommendations for the future. Strategic Air Command personnel presented a classified briefing for the Council.

At the Battle Creek meeting the Council discussed the congressional hearings on civil defense conducted by the subcommittee (Holifield Committee) of the House Committee on Government Operations; new developments in civil defense; and the new civil defense programs—continuity of State and local government and reduction of urban vulnerability. Members of the FCDA planning staff gave classified briefings on strategic warning, the threat this Nation faces, and the basic responsibilities FCDA would assume in an emergency.

CIVIL DEFENSE PLANNING ASSUMPTIONS

These planning assumptions are effective as of September 4, 1956. They will be amended or, if necessary, replaced by new assumptions whenever changes of sufficient magnitude clearly indicate that this issuance is inadequate.

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These assumptions are intended to cover several developmental phases of modern war. These start with the present period when jet aircraft have not fully replaced conventional propeller-driven aircraft, continue through the time when jet bombers may become sonic or slightly supersonic in speed, and anticipate the time when some intermediate-range ballistic missiles (IRBM) and intercontinental ballistic missiles (ICBM) may be available.

Since there is no evidence that any nation has yet overcome all of the scientific problems involved in either the IRBM or the ICBM, the major emphasis of these assumptions is on presently available means of delivery. The prime characteristic of this period is the possession by a potential enemy of the means of making nuclear weapons of megaton yield and of delivering them on distant targets by piloted aircraft. Improvements in both offensive and defensive capabilities are virtually certain. However, the strategy and tactics of civil defense are not likely to require major change from those currently being developed until some new technological breakthrough is achieved.

Planning assumptions are sometimes misunderstood. Frequently they are taken for predictions. Planning assumptions are in no sense predictions. Nor are they based on uncontrovertible facts that lead to only one conclusion. Planning assumptions are created by a need for broad estimates in areas where one is bound to be unsure. Civil defense needs to have a common base for planning in several different areas. Consequently, FCDA carefully canvasses available intelligence and available information and then establishes assumptions consistent with such estimates.

These assumptions give a basis on which Federal, State, and local civil defense authorities can develop plans and can set priorities of action. It is expected that each agency with civil defense responsibilities will review its plans in the light of these assumptions.

Basic Premises

- A. It is accepted that a potential enemy has the capability of attacking any target within the United States or its possessions.
- B. It is accepted that a potential enemy has the capability of:
 1. Producing nuclear weapons, biological and chemical warfare agents, as well as conventional incendiary and high explosive weapons.
 2. Delivering these weapons by piloted aircraft, submarine launched missiles or mines, and by clandestine means.
 3. Supporting a large scale war effort by technical and industrial skills and organizations.

- C. It is accepted that a potential enemy is engaged in a major effort to develop both guided and ballistic missiles, including the ICBM.

Type of Attack

- A. It is assumed that the greatest weight of attack will be nuclear since the capability of a potential enemy may reach, in the next few years, a size which it could consider as exceeding the destructive tonnage necessary to win a war.
- B. It is assumed that, if the United States is attacked, the major effort will consist of delivering nuclear weapons upon bases of military retaliation and centers of population and industry.
 1. It is assumed that, until the intercontinental ballistic missile is available to an aggressor, principal reliance will be placed upon delivery by manned bombers, with higher speed and performance jet bombers tending to replace propeller-driven bombers.
 2. It is further assumed that, even when the intercontinental ballistic missile is available, a considerable weight of attack will continue to require delivery by manned aircraft.
 3. It is assumed that the time is distant when any nation will possess enough very long-range missiles to make possible the instant destruction of another nation.
- C. It is assumed that nuclear weapons will also be delivered by missiles or mines from submarines or surface vessels or by clandestine means, on a scale considerably less than that of the air attack. Their use independent of an air attack is not considered likely. Danger from naval attack decreases with distance from the coast.
- D. It is assumed that surface bursts will generally be employed since radioactive fallout from such bursts can increase casualties and interfere with military or civilian activity for days or weeks.
- E. It is assumed that, although nuclear weapons will be relied upon as the means of gaining the military decision, chemical warfare and biological warfare agents will be used against humans. Use of these weapons will be to increase confusion and impede defensive actions. The chances of use of such weapons are greater in subsequent attacks than in the initial blow. In any case, the threat is minor as compared with that of nuclear weapons.
- F. It is assumed that biological warfare agents will be employed against animals and crops, especially if long-term recuperative power gives indications of being a decisive factor. Use of this weapon on any large scale is unlikely in the initial blow.
 - G. It is assumed that psychological warfare and all out propaganda efforts will accompany any attack in order to magnify and distort the real situation, to disrupt defense programs, impair essential will to fight.

- II. It is assumed that, in addition to clandestine introduction of nuclear weapons, sabotage will be employed, involving conventional means as well as biological and chemical weapons.
- I. It is assumed that the enemy's initial attack will be an attempted knockout blow, placing primary reliance on nuclear weapons delivered by air. It is assumed that there will be subsequent attacks of varying intensity, employing in addition other weapons and means of delivery.

Targets

- A. It is assumed that bases of military retaliation, other important military installations, and concentrations of population and industry will be targets for nuclear attack.
- B. It is assumed that an aggressor will select targets from the following categories with priorities determined by its objectives at any particular time:
 1. Critical Target Areas as defined in "Target Areas for Civil Defense Purposes."
 2. Civil and military airfields with hardsurfaced runways of 7,000 feet or more, with major servicing and maintenance facilities.
 3. Major harbors, ports, and naval bases.
 4. AEC facilities.
 5. Major military command and control headquarters, such as the Pentagon, Continental Army Command, Naval Sea Frontiers, Strategic Air Command, Continental Air Command, and Tactical Air Command.
 6. Target Areas other than CTA's as defined in "Target Areas for Civil Defense Purposes," including all State capitals.
 7. Army and Marine Corps posts and stations housing divisions of the General Reserve and Fleet Marine Force.
 8. Major military service supply depots.

In many cases, a number of the above military and civilian categories will be found close together. For example, New York City meets the criteria of at least the following categories: (a) Critical Target Area; (b) Major port; (c) Naval Base; (d) Airfields with hardsurfaced runways in excess of 7,000 feet.

- C. It is assumed that an aggressor may frequently choose to direct attack at any one, several, or all aiming points within a target area. Some targets contain only one probable aiming point. Most, however, either because they are large in area or because they are composed of a variety of military and civilian targets, contain a number of aiming points.

- D. It is assumed that all possible targets will not be attacked either in the initial blow or subsequently. The number of targets to be attacked or the pattern of attack cannot reasonably be predicted at any specific date.

Weapon Size and Physical Damage

- A. It is assumed that a potential enemy can produce nuclear weapons of varying yields ranging from few kilotons (thousands of tons) to megatons (millions of tons) of TNT equivalent.
- B. It is assumed that a potential enemy's stockpile of nuclear weapons is growing and that the number of megaton yield weapons will, in the course of time, become large enough to permit employment of such weapons on progressively larger numbers of targets.
- C. It is assumed that, for the development of civil defense plans for (a) evacuation and reception; (b) relocation or dispersal; (c) shelter requirements and criteria, the nuclear weapons used will cause complete destruction (A-Zone) within a radius of 2 miles as a minimum, 5 miles as a maximum.
- D. It is assumed that bombing errors will occur and that the aiming point and actual ground zero will seldom exactly coincide. It is assumed, however, that the area of complete destruction will generally be of sufficient size to include such an aiming point in cases where the attacking aircraft reaches its bomb release line.
- E. It is assumed that any target hit by nuclear weapons will be substantially destroyed by the direct effects of blast, heat, and radiation. A number of targets will require more than one detonation because of (1) total area; (2) shape, particularly when one axis is considerably longer than another; (3) wide separation of rewarding aiming points.
- F. It is assumed that radioactive fallout resulting from surface bursts of weapons, whether on or off target, will spread downwind over considerable areas. Fallout from a large-scale attack could affect any portion of the United States.
- G. It is assumed that a potential enemy can produce a considerable variety of biological and chemical warfare agents and can deliver them on the United States. It is assumed, however, that large-scale delivery of such weapons will be less accurate and less damaging than the delivery of nuclear weapons by a similar number of carriers.

Warning Time

- A. It is assumed that a civil defense alert of an initial mass attack by manned aircraft will be received on the Canadian border and Gulf coasts from 1 to 3 hours before

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targets within these boundaries will be under attack. It is expected that intelligence on the probable time that attacking planes will take to reach specific targets will be available to civil defense through the Civil Air Defense Warning system.

- B. It is assumed that interior targets will have 1 to 3 hours additional between the time a civil defense alert is received and the time when interior targets are under attack from manned aircraft.
- C. No definite assumptions can be made of the availability of strategic warning. However, plans should also include the contingency of a strategic warning, announced to the Nation by the President, before any direct attack on this country had been initiated. It might be measured in hours or even days, and would make possible more careful and detailed preparations for an actual alert. We can never be sure that there will be strategic warning. Emphasis should be placed on maximum utilization of tactical warning since the probability of such warning is much higher.

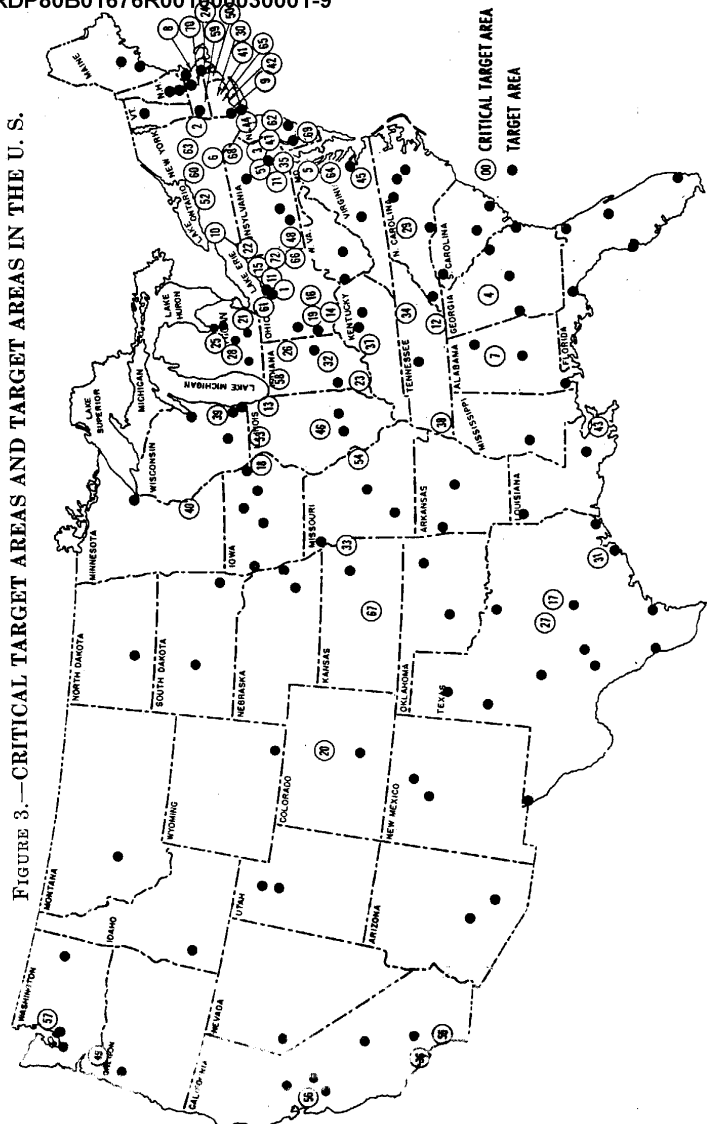
CRITICAL TARGET AREAS AND TARGET AREAS

The target areas and critical target areas listed in this report have been so designated on the basis of population and industry criteria. FCDA, in conjunction with other Federal agencies, is currently developing an expanded list of target and critical target areas which will incorporate certain military considerations as well as civil defense criteria. The new list, consonant with current planning assumptions, will be issued at a later date.

One hundred and eighty-seven areas in the continental United States have been designated target areas meeting the population and industry criteria. (In addition, eight areas in United States Territories and possessions have been so designated.) The 187 target areas include all standard metropolitan areas as defined by the Federal Committee on Standard Metropolitan Areas, and all State capitals not already included as standard metropolitan areas. Seventy-two of the 187 areas have been designated critical target areas. These are the standard metropolitan areas having 40,000 or more industrial employees as reported by the United States Department of Labor. Washington, D. C., because of its importance as the Nation's capital, is listed as a critical target area.

Locations of the 187 areas are shown on the following map (fig. 3). These are areas regarded for civil defense purposes as probable targets for nuclear attack since they contain major concentrations of population and industry.

FIGURE 3.—CRITICAL TARGET AREAS AND TARGET AREAS IN THE U. S.



The following changes in target area definitions were made within the past year as a result of action by the Federal Committee on Standard Metropolitan Areas:

1. The title of the Los Angeles area was changed to Los Angeles-Long Beach. This was simply a change in title, not in area covered.
2. The definition of the Evansville, Ind., area was amended to include Henderson County, Ky.
3. The definition of the Atlanta, Ga., area was amended to include Clayton County, Ga.
4. The West Palm Beach, Fla., standard metropolitan area was established and hence will be regarded as an additional target area.

Two areas formerly classified as target areas are now included in the list of critical target areas; namely, Greensboro-High Point, N. C., and Rockford, Ill. These were changed to critical target areas upon meeting the criteria of standard metropolitan areas having 40,000 or more industrial employees as reported in at least three consecutive issues of the "Bi-Monthly Summary of Labor Market Developments in Major Areas" published by the Department of Labor.

The latest census figures on population of most critical target areas are as of 1950. The United States Bureau of the Census has made estimates for four of the areas, however, as of January 1, 1956; namely, Houston, Milwaukee, St. Louis, and Washington, D. C. A total of the latest figures available indicates about 69,158,000 people in the 72 areas.

Each of these areas is a standard metropolitan area as defined by the Federal Committee on Standard Metropolitan Areas. Except in New England, each area is composed of a county or group of closely integrated contiguous counties, having at least one city of 50,000 inhabitants or more. In New England, towns and cities were the units used in defining standard metropolitan areas, with population density the principal criterion.

Since most critical target areas contain entire counties, they may have some rural as well as urban territory. The thickly settled urban core of each standard metropolitan area is referred to as its urbanized area.

Each critical target area has at least one central city of 50,000 or more inhabitants. Some areas have two or more such cities. In the following table the largest city in each of the 72 critical target areas and all other cities of 90,000 or more in the areas are listed as "principal cities" with a comparison of each city's resident population with its day population. The 94 principal cities in the 72 CTA's had a resident population of 41,345,000. Their combined day population was 48,508,000 or 18 percent larger than resident population. In six cities (Som-

erville, Mass.; Long Beach, Berkeley, and Richmond, Calif.; Jersey City, N. J., and Yonkers, N. Y.) the day population is less than resident population as commuters go into the larger central cities in their daily employment. In several cities, population in the daytime increases 50 percent or more over resident population. The population of Newark, N. J., more than doubles in the daytime.

Critical Target Area Population

Map Refer- ence No. ¹	Critical target area and principal cities	Population (1950 except where noted)				
		Critical target area	Urbanized area	Principal city ²		
				Resident	Day ³	
					Number	Percent of resi- dent
	Total.....	60,158,283	(4)	41,345,129	(4)	(4)
1	Akron, Ohio.....	410,032	366,765	274,605	314,069	115
2	Albany-Schenectady-Troy, N. Y.....	514,490	291,997	134,995	166,975	124
	Albany-Schenectady.....			91,785	108,470	118
3	Allentown-Bethlehem-Easton, Pa. (N. J.).....	437,824	225,902	106,756	141,150	132
4	Atlanta, Ga.....	694,909	*507,887	331,314	416,569	126
5	Baltimore, Md.....	1,337,373	1,161,852	949,708	1,071,104	113
6	Binghamton, N. Y.....	184,686	144,011	80,674	96,033	119
7	Birmingham, Ala.....	558,928	445,314	328,037	451,892	139
8	Boston, Mass.....	2,369,986	2,333,448	801,444	1,075,107	134
	Boston-Lynn-Cambridge.....			99,738	117,736	118
	Boston-Lynn-Cambridge.....			120,740	147,884	122
	Boston-Lynn-Cambridge.....			102,351	90,893	89
9	Bridgeport, Conn.....	258,137	237,435	158,709	209,282	132
10	Buffalo, N. Y.....	1,080,230	798,043	580,132	717,098	124
	Buffalo-Niagara Falls.....			90,872	100,945	111
11	Canton, Ohio.....	283,194	173,917	116,912	155,724	133
12	Chattanooga, Tenn. (Ga.).....	246,453	167,764	131,041	159,660	122
13	Chicago, Ill. (Ind.).....	5,495,364	4,920,816	3,620,962	4,261,643	117
	Chicago-Gary, Ind.....			133,911	156,425	117
14	Cincinnati, Ohio (Ky.).....	904,402	813,292	503,998	620,473	123
15	Cleveland, Ohio.....	1,465,511	1,383,599	914,808	1,085,830	119
16	Columbus, Ohio.....	503,410	437,707	375,901	422,752	112
17	Dallas, Tex.....	614,799	538,924	434,462	497,621	115
18	Dayton, Ohio.....	234,256	194,925	74,549	112,271	151
19	Dayton, Ohio.....	457,333	346,864	243,372	301,540	121
20	Denver, Colo.....	563,832	496,743	415,786	466,626	112
21	Detroit, Mich.....	8,010,191	2,009,098	348,068	518,780	149
	Detroit-Dearborn.....			94,994	132,381	160

See footnotes at end of table.

Critical Target Area Population—Continued

Map reference No. ¹	Critical target area and principal cities	Population (1950 except where noted)				
		Critical target area	Urbanized area	Principal city ²		
				Resident	Day ³	
					Number	Percent of resident
22	Erie, Pa.	219,388	151,710	130,803	155,406	119
23	Evansville, Ind. (Ky.)	191,137	137,573	128,636	141,376	110
24	Fall River-New Bedford, Mass. (R. I.)	274,767	243,615	111,983	122,666	110
25	Flint, Mich.	270,963	197,631	109,189	120,643	110
26	Fort Wayne, Ind.	183,722	140,314	163,143	192,204	118
27	Fort Worth, Tex.	361,233	315,578	133,607	151,042	113
28	Grand Rapids, Mich.	288,292	226,817	276,778	309,781	111
29	Greensboro-High Point, N. C.	191,057	(⁴)	176,515	208,373	118
30	Hartford, Conn.	358,061	300,798	74,389	(⁴)	(⁴)
31	Houston, Tex.	1,077,000	700,506	177,397	229,099	129
32	Indianapolis, Ind.	551,777	502,375	711,000	775,100	109
33	Kansas City, Mo. (Kans.)	814,357	606,350	427,173	484,222	113
34	Knoxville, Tenn.	337,105	148,166	129,553	140,336	108
35	Lancaster, Pa.	234,717	76,280	456,622	529,241	116
36	Los Angeles-Long Beach, Calif.	4,367,911	3,996,946	124,769	167,696	134
37	Louisville, Ky. (Ind.)	576,900	472,736	63,774	102,690	161
38	Memphis, Tenn.	482,393	406,034	1,970,358	2,590,743	131
39	Milwaukee, Wisc.	797,000	829,495	95,702	97,779	102
40	Minneapolis-St. Paul, Minn.	1,116,509	985,101	250,757	245,714	98
41	New Britain-Bristol, Conn.	146,953	123,079	104,577	122,896	118
42	New Haven, Conn.	264,622	244,836	570,445	622,288	109
43	New Orleans, La.	685,405	659,768	7,891,957	8,201,842	104
44	New York-Northeast New Jersey	12,911,994	12,296,117	112,817	116,145	103
45	Norfolk-Portsmouth-Newport News, Va.	594,517	385,111	290,017	295,974	99
46	Norfolk, Va.	250,512	154,539	438,776	884,801	202
47	Philadelphia, Pa. (N. J.)	3,611,048	2,922,576	139,336	161,116	116
48	Pittsburgh, Pa.	2,213,236	1,532,953	152,798	161,293	92
	Pittsburgh			676,806	1,011,618	149

See footnotes at end of table.

Critical Target Area Population—Continued

Map reference No. ¹	Critical target area and principal cities	Population (1950 except where noted)				
		Critical target area	Urbanized area	Principal city ²		
				Resident	Day ³	
					Number	Percent of resident
49	Portland, Oreg. (Wash.)	704,829	512,643	373,628	468,699	125
50	Providence, R. I. (Mass.)	737,203	583,346	248,674	371,896	150
51	Reading, Pa.	255,740	154,931	109,320	179,112	164
52	Rochester, N. Y.	487,632	409,149	332,488	383,325	115
53	Rockford, Ill.	182,385	122,226	92,927	(⁴)	(⁴)
54	St. Louis, Mo. (Ill.)	1,892,000	1,400,058	784,000	1,002,200	119
55	San Diego, Calif.	556,808	432,974	334,387	399,198	119
56	San Francisco-Oakland, Calif.	2,240,767	2,022,078	775,357	1,012,145	131
57	Seattle, Wash.	732,992	621,509	384,575	491,670	128
58	South Bend, Ind.	205,058	168,165	113,805	102,311	90
59	Springfield-Holyoke, Mass. (Conn.)	407,255	356,908	99,545	89,016	89
60	Syracuse, N. Y.	341,719	285,286	467,591	550,842	118
61	Toledo, Ohio	395,551	364,344	115,911	155,610	134
62	Trenton, N. J.	228,781	189,321	162,399	210,065	129
63	Utica-Rome, N. Y.	284,262	117,424	220,583	258,380	117
64	Washington, D. C. (Md.-Va.)	1,884,000	1,287,333	101,531	130,825	129
65	Waterbury, Conn.	154,656	131,707	785,000	980,100	114
66	Wheeling, W. Va.-Steubenville, Ohio	354,092	106,650	104,477	120,685	116
67	Wichita, Kans.	222,290	194,047	58,891	95,532	162
68	Wilkes-Barre-Hazleton, Pa.	392,241	271,589	168,279	182,992	109
69	Wilmington, Del. (N. J.)	268,387	187,359	76,826	90,358	129
70	Worcester, Mass.	276,336	219,330	110,356	146,929	133
71	York, Pa.	202,737	78,796	203,486	228,125	112
72	Youngstown, Ohio (Pa.)	528,496	296,051	59,953	94,276	157
	Youngstown			168,330	248,598	148

¹ Refers to map entitled "Critical Target Areas and Target Areas in the U. S."² Includes the largest city in each of the 72 Critical Target Areas and all other cities of 90,000 population or more within the areas.³ Normal maximum day population as estimated by the U. S. Bureau of the Census.⁴ Not available.⁵ Does not include data for Clayton County, Ga.⁶ Does not include data for Henderson County, Ky.⁷ Estimates as of Jan. 1, 1956.

Source: U. S. Bureau of the Census—1950.

Population of Target Areas¹

Target area	Population (1950)	Target area	Population (1950)
Total, 123 areas.....	18,910,205	Lowell, Mass.....	133,928
Agana City, Guam.....	1,330	Lubbock, Tex.....	101,045
Albuquerque, N. Mex.....	145,673	Macon, Ga.....	135,043
Altoona, Pa.....	139,514	Madison, Wis.....	169,357
Amarillo, Tex.....	87,140	Manchester, N. H.....	88,370
Asheville, N. C.....	124,408	Mayaguez, P. R.....	87,907
Atlantic City, N. J.....	132,599	Miami, Fla.....	495,084
Augusta, Ga. (S. C.).....	162,013	Mobile, Ala.....	231,105
Augusta, Maine.....	83,881	Montgomery, Ala.....	138,965
Austin, Tex.....	160,980	Montpelier, Vt.....	42,870
Baton Rouge, La.....	158,236	Muncie, Ind.....	90,252
Bay City, Mich.....	88,461	Nashville, Tenn.....	321,758
Beaumont-Port Arthur, Tex.....	195,083	Ogden, Utah.....	83,319
Bismarck, N. Dak.....	25,673	Oklahoma City, Okla.....	325,352
Boise, Idaho.....	70,649	Olympia, Wash.....	44,884
Brookton, Mass.....	129,428	Omaha, Nebr. (Iowa).....	366,365
Carson City, Nev.....	4,172	Orlando, Fla.....	114,950
Cedar Rapids, Iowa.....	104,274	Pago Pago, American Samoa.....	1,586
Charleston, S. C.....	164,856	Phoenix, Ariz.....	331,770
Charleston, W. Va.....	322,072	Pierre, S. Dak.....	8,111
Charlotte, N. C.....	197,052	Pittsfield, Mass.....	66,567
Charlotte Amalie, V. I.....	11,469	Ponce, P. R.....	129,810
Cheyenne, Wyo.....	47,662	Portland, Maine.....	119,942
Columbia, S. C.....	142,565	Pueblo, Colo.....	109,885
Columbia, Ga. (Ala.).....	170,541	Racine, Wis.....	136,450
Concord, N. H.....	63,022	Raleigh, N. C.....	328,060
Corpus Christi, Tex.....	165,471	Richmond, Va.....	133,407
Decatur, Ill.....	98,853	Roanoke, Va.....	277,140
Des Moines, Iowa.....	226,010	Sacramento, Calif.....	153,515
Dover, Del.....	37,870	Saginaw, Mich.....	96,826
Dubuque, Iowa.....	71,337	Salt Lake City, Utah.....	101,401
Duluth, Minn.-Superior, Wis.....	252,777	San Antonio, Tex.....	274,895
Durham, N. C.....	101,639	San Bernardino-Riverside-Ontario, Calif.....	58,929
El Paso, Tex.....	194,968	San Jose, Calif.....	451,688
Fort Smith, Ark.....	64,202	San Jose, Calif.....	290,547
Frankfort, Ky.....	25,933	San Juan-Rio Piedras, P. R.....	465,741
Fresno, Calif.....	276,515	Santa Fe, N. Mex.....	38,153
Gadsden, Ala.....	93,892	Savannah, Ga.....	151,481
Galveston, Tex.....	113,066	Scranton, Pa.....	257,396
Green Bay, Wis.....	98,314	Shreveport, La.....	216,686
Greenville, S. C.....	168,152	Sioux City, Iowa.....	103,917
Hamilton-Middletown, Ohio.....	147,203	Sioux Falls, S. Dak.....	70,910
Harrisburg, Pa.....	282,241	Spokane, Wash.....	221,561
Helena, Mont.....	24,540	Springfield, Ill.....	131,484
Honolulu, T. H.....	363,020	Springfield, Mo.....	104,823
Huntington, W. Va.-Ashland, Ky. (Ohio).....	245,795	Springfield, Ohio.....	111,661
Jackson, Mich.....	107,925	Stamford-Norwalk, Conn.....	198,023
Jackson, Miss.....	142,104	Stockton, Calif.....	200,750
Jacksonville, Fla.....	304,029	Tacoma, Wash.....	273,876
Jefferson City, Mo.....	35,464	Tallahassee, Fla.....	51,590
Johnstown, Pa.....	201,354	Tampa-St. Petersburg, Fla.....	408,143
Juneau, Alaska.....	5,956	Terre Haute, Ind.....	105,160
Kalamazoo, Mich.....	128,707	Topeka, Kans.....	105,418
Kenosha, Wis.....	75,238	Tucson, Ariz.....	141,216
Lansing, Mich.....	172,941	Tulsa, Okla.....	251,686
Laredo, Tex.....	56,141	Waco, Tex.....	130,194
Lawrence, Mass.....	125,935	Waterloo, Iowa.....	100,448
Lexington, Ky.....	100,746	West Palm Beach, Fla.....	114,688
Lima, Ohio.....	98,183	Wichita Falls, Tex.....	98,493
Lincoln, Nebr.....	119,742	Winston-Salem, N. C.....	148,135
Little Rock-North Little Rock, Ark.....	196,685		
Lorain-Elyria, Ohio.....	148,162		

¹ Critical target areas are not included.

ATTACK WARNING

Time required to disseminate an attack warning through the nationwide civil defense warning system was reduced to 8 minutes during fiscal year 1956. When FCDA was assigned the civilian attack warning responsibility in 1952, it required about 20 minutes to notify all key point centers of an alert.

Test the reduction in time now required to disseminate warnings be misleading, it should be emphasized that FCDA responsibility extends only through the Federal warning system—down to key point warning centers. Action beyond those points is the responsibility of State and local governments.

In operating the Federal part of the warning network, FCDA works in close cooperation with the Air Force, which triggers alert warnings.

FCDA has assigned attack warning officers to control centers of each of the 16 Air Defense Divisions in the United States. The FCDA officers disseminate warnings over the Civil Air Defense Warning (CADW) network. This network consists of full-period, private, 2-way telephone circuits that connect the 16 civil defense warning centers with nearly 200 civil defense key point warning centers located strategically throughout the United States. FCDA pays the full communications costs of the system to the key points; and this is the only completely Federal portion of the warning system.

From the key points, the system fans out to more than 3,500 subkey point centers in the United States, located in such places as local police and fire stations. These, and the local centers that control the public attack warning devices, such as sirens, horns, and whistles, are the State and local part of the warning net.

FCDA provides matching funds for the purchase or installation of warning and communications equipment to the States and localities, but not the operating expenses. FCDA also provides technical and operational guidance in its various publications.

Communication facilities used by States for their warning systems include State police radio, teletype, telephone, and special systems such as bell-and-light (telephone), and tone generators (radio).

There are two public action signals: the "alert" signal, which may mean evacuation in certain areas and mobilization in others; and the "take cover" signal, which means that the public should take the best shelter available immediately.

Staffing to provide 24-hour coverage at FCDA warning centers by attack warning officers was about 85 percent complete at the end of the fiscal year.

In the last half of the fiscal year, a study was made of the effect of the new Air Force SAGE (Semi-Automatic Ground Environment) warning system on the civil air defense warning system. As a result, preliminary plans were made for relocation of FCDA warning centers, and tentative revisions outlined for attack warning procedures. To keep FCDA abreast of new developments in the SAGE system, an FCDA liaison officer was assigned to work with the SAGE staff at Lincoln Laboratories, Lexington, Mass., and with representatives of the Continental Air Defense Command.

An FCDA National Warning Control System (NAWAC), completed in May 1956, will provide a medium for fast exchange of tactical information between FCDA National Headquarters and alternate headquarters, regional offices, and air defense warning centers. By providing warning control, NAWAC will increase materially the operational efficiency of the FCDA attack warning system.

Civil Defense Key Points

Map reference No. 1	State	City	Map reference No. 1	State	City
8th Air Division					
1	Idaho	Boise.			
2		Coeur D'Alene.			
3	Oregon	Pendleton.			
4	Washington	Collax.			
5		Collee.			
6		Pasco.			
7		Spokane.			
8		Wenatchee.			
9		Yakima.			
20th Air Division					
1	Illinois	East St. Louis.			
2		Peoria.			
3		Rock Island.			
4		Springfield.			
5	Iowa	Cedar Rapids.			
6		Council Bluffs.			
7		Davenport.			
8		Des Moines.			
9		Sioux City.			
10		Waterloo.			
11		Topeka.			
12	Kansas	Wichita.			
13	Missouri	Jefferson City.			
14		Kansas City.			
15		St. Louis.			
16	Nebraska	Lincoln.			
17		Omaha.			
28th Air Division					
1	Oregon	Eugene.			
2		Medford.			
3		Portland.			
4		Salem.			
5		The Dalles.			
6	Washington	Everett.			
7		Olympia.			
8		Port Angeles.			
9		Renton.			
29th Air Division					
1	Connecticut	Bethany.			
2		Colchester.			
3		Hartford.			
4		Ridgefield.			
5	Delaware	Dover.			
6	Massachusetts	Boston.			
7		Brockton.			
8		Northampton.			
9		Worcester.			
10		Hammonton.			
11	New Jersey	Morrisstown.			
12		Trenton.			
30th Air Division					
1	Idaho	Boise.			
2		Coeur D'Alene.			
3		Pendleton.			
4		Collax.			
5		Collee.			
6		Pasco.			
7		Spokane.			
8		Wenatchee.			
9		Yakima.			
32th Air Division					
1	Montana	Helena.			
2	North Dakota	Bismarck.			
3	South Dakota	F Pierre.			
4		Rapid City.			
5	Wyoming	Cheyenne.			
33th Air Division					
1	Idaho	Boise.			
2		Coeur D'Alene.			
3		Pendleton.			
4		Collax.			
5		Collee.			
6		Pasco.			
7		Spokane.			
8		Wenatchee.			
9		Yakima.			

Civil Defense Key Points—Continued

Map reference No. 1	State	City	Map reference No. 1	State	City
30th Air Division—Continued					
7	Michigan	Paw Paw.			
8		Port Huron.			
9		Rockford.			
10	New York	Buffalo.			
11		Niagara Falls.			
12		Rochester.			
13		Cambridge.			
14	Ohio	Cant'n.			
15		Cleveland.			
16		Findlay.			
17		Toledo.			
18		Youngstown.			
19	Pennsylvania	Altoona.			
20		Butler.			
21		Erie.			
22		Greensburg.			
23		Pittsburgh.			
24		Punxsutawney.			
25		Washington.			
26	West Virginia	Wheeling.			
31st Air Division					
1	Minnesota	Brainerd.			
2		Duluth.			
3		Minneapolis.			
4		Rochester.			
5		St. Paul.			
6	North Dakota	Fargo.			
7	Wisconsin	Eau Claire.			
8		Superior.			
32d Air Division					
1	Maine	Augusta.			
2		Bangor.			
3		Houlton.			
4		Portland.			
5	New Hampshire	Concord.			
6		Littleton.			
7	New York	Plattsburg.			
8		Syracuse.			
9		Utica.			
10	Vermont	Montpelier.			
11		Rutland.			
33d Air Division					
1	Arkansas	Little Rock.			
2	Louisiana	Bossier City.			
3	Oklahoma	Oklahoma City.			
4		Tulsa.			
5	Texas	Arlington.			
6		Austin.			
7		Boerne.			
8		Houston.			
34th Air Division					
1	Arizona	Phoenix.			
2	California	San Diego.			
3	New Mexico	Santa Fe.			
4	Texas	El Paso.			
5	Utah	Salt Lake City.			
35th Air Division					
1	Alabama	Birmingham.			
2		Gadsden.			
3		Mobile.			
4	Florida	Montgomery.			
5		Jacksonville.			
6		Miami.			
7		Tallahassee.			
8		Tampa.			
9	Georgia	Atlanta.			
10		Savannah.			
11	Louisiana	Baton Rouge.			
12		New Orleans.			
13	Mississippi	Jackson.			
14	South Carolina	Columbia.			
37th Air Division					
1	Illinois	Chicago.			
2		Joliet.			
3		Park Forest.			
4		Rockford.			
5	Indiana	Crown Point.			
6	Michigan	Marquette.			
7		Sault Ste. Marie.			
8		Traverse City.			
9	Wisconsin	Appleton.			
10		La Crosse.			
11		Madison.			
12		Milwaukee.			
13		Stevens Point.			
14		Wausau.			
38th Air Division					
1	Illinois	Urbana.			
2	Indiana	Evansville.			
3		Indianapolis.			
4		Lafayette.			
5		Muncie.			
6		New Albany.			
7		Terre Haute.			
8	Kentucky	Frankfort.			
9	Ohio	Cincinnati.			
10		Columbus.			
11		Dayton.			
12		Ironton.			
13	Tennessee	Arlington.			
14		Chattanooga.			
15		Knoxville.			
16		Nashville.			
17	West Virginia	Charleston.			
18		Clarksburg.			
19		Parkersburg.			
39th Air Division					
1	District of Columbia	WASHINGTON.			
2	Maryland	Baltimore.			
3		Hagerstown.			
4		Salisbury.			
5	North Carolina	Raleigh.			
6	Virginia	Norfolk.			
7		Richmond.			
8	West Virginia	Martinsburg.			

The problem of adequate systems to warn city dwellers of an impending attack has been a major concern of civil defense from the inception of the program. States and cities have been encouraged to procure and install the necessary warning devices, with the Federal Government providing half of the funds under the Federal contributions program. Through June 30, 1956, a total of \$7,601,837 in Federal Funds had been obligated for the attack-warning programs of States and localities.

Of 261 principal cities in Target Areas and Critical Target Areas, 165 or 63 percent had good outdoor warning systems as of June 30. The remaining cities had varying degrees of warning efficiency with the systems in 22 cities regarded as completely inadequate. The 261 cities include all cities of 50,000 in the United States, Territories, and possessions.

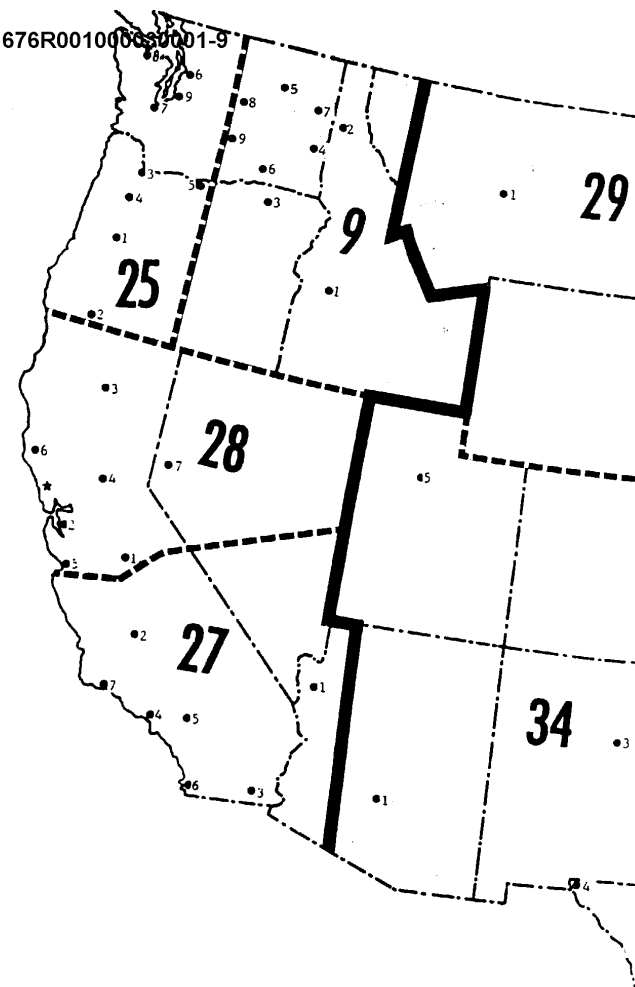
Although satisfactory outdoor warning devices may be installed, there is still the problem of how to warn people in homes and other buildings from which the outdoor devices may not be heard. Under contract with FCDA, certain research organizations are engaged in studying and developing successful internal warning systems which can utilize existing power distributing or telephone facilities.

RADIOACTIVE FALLOUT FORECAST PROGRAM

The need for defensive measures against possible radioactive fallout from nuclear explosions led to the establishment of a fallout forecast program by the United States Weather Bureau in June 1955. The program resulted from a civil defense delegation by FCDA to the Department of Commerce.

The initial program provided data for fallout patterns around the Nation's 72 Critical Target Areas. The program was expanded in February 1956 to cover the entire Nation, Alaska, and Hawaii.

The system is based on observations of wind direction and velocity taken twice daily at 52 Rawin Observatories (Radio or Radar Wind Direction Finding Observatories) scattered over the country as shown on the list, United States Weather Bureau Rawin Observatories, and map (fig. 5). Each station sends balloon-borne radio transmitters, called rawinsondes, as high as 100,000 feet to obtain readings on atmospheric pressure, temperature, and humidity. Data on wind speed and direction at various levels are obtained by radar tracking of the balloons.



LEGEND

- ★ FCDA Office
- Number refers to Civil Defense Key Points listed on following pages

CIVIL DEFENSE AREAS

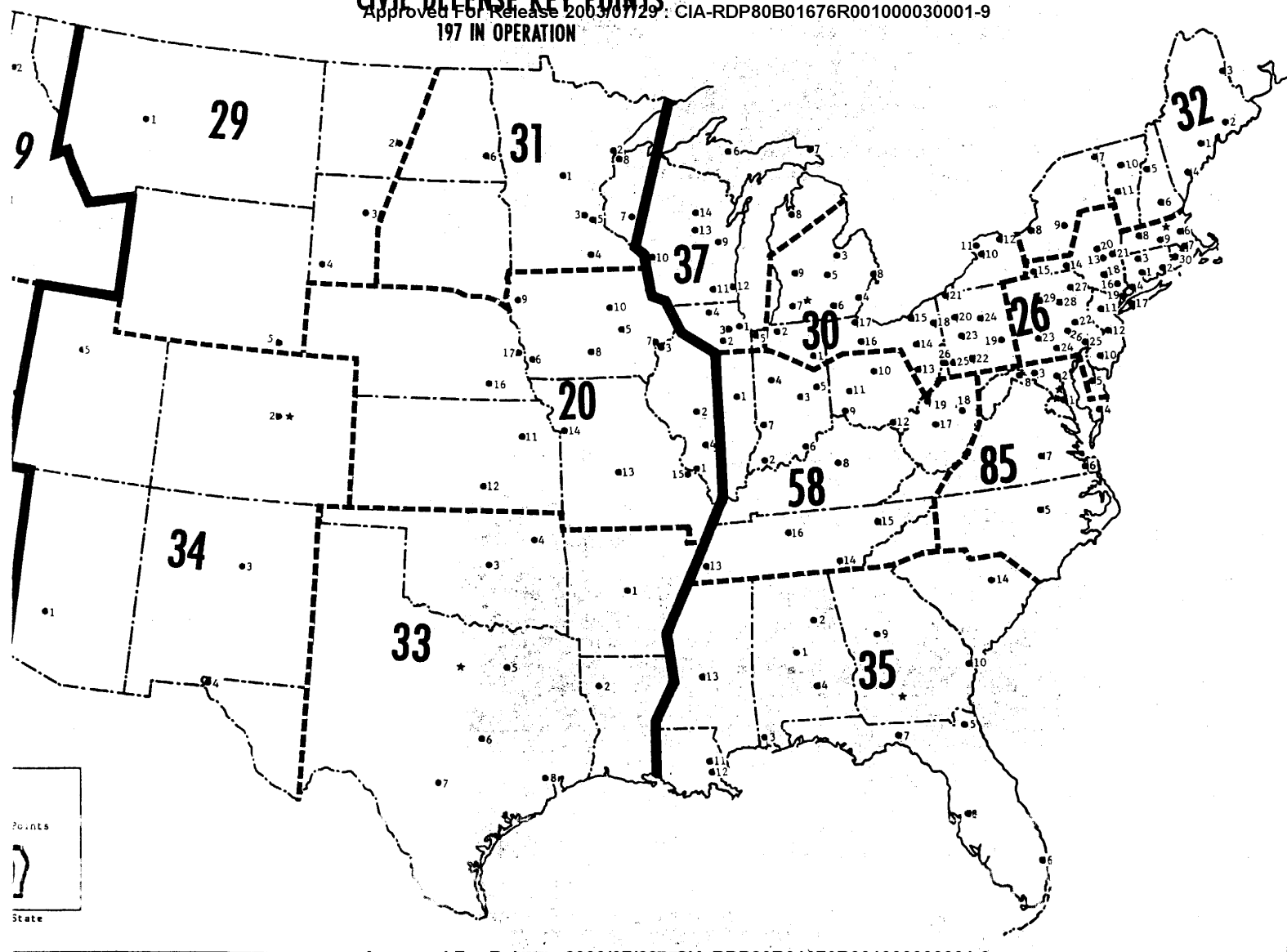
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* Key Points are staffed entirely by State

CIVIL DEFENSE KEY POINTS*

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197 IN OPERATION



Approved For Release 2003/07/29 : CIA-RDP80B01676R001000030001-9

Figure 4

The number of Rawin Observatories was scheduled to be increased from 52 to 68 for fallout forecast purposes on September 1, 1956. Arrangements also were in progress during the fiscal year for obtaining twice daily forecasts from eight locations in southern Canada.

U. S. Weather Bureau Rawin Observatories

Region and State	City	Call letters	Region and State	City	Call letters
<i>Region 1</i>			<i>Region 5—Con.</i>		
Maine.....	Caribou.....	CAR	New Mexico.....	Albuquerque.....	ABQ
	Portland.....	PWM	Oklahoma.....	Oklahoma City.....	OKC
New York.....	Albany.....	ALB		Big Spring.....	MAF
	Buffalo.....	BUF	Texas.....	El Paso.....	ELP
	New York.....	HEM		Fort Worth.....	FWH
				San Antonio.....	SAT
<i>Region 2</i>			<i>Region 6</i>		
District of Columbia.	Washington.....	WBC	Colorado.....	Denver.....	LRY
Ohio.....	Dayton.....	FPO		Dodge City.....	DDC
Pennsylvania.....	Philadelphia.....	PHL	Kansas.....	Topeka.....	TOP
	Pittsburgh.....	PIT		International Falls.	INL
Virginia.....	Norfolk.....	NGU	Minnesota.....	St. Cloud.....	STC
<i>Region 3</i>				Omaha.....	OFF
Alabama.....	Montgomery.....	GUN	Nebraska.....	Bismarck.....	BIS
Florida.....	Tampa.....	TPA	North Dakota.....	Rapid City.....	RAP
Georgia.....	Athens.....	AHN	South Dakota.....	Lander.....	LAN
North Carolina.....	Greensboro.....	GSP	Wyoming.....		
South Carolina.....	Charleston.....	CHS			
Tennessee.....	Nashville.....	BNA			
<i>Region 4</i>			<i>Region 7</i>		
Illinois.....	Chicago.....	MDW	Arizona.....	Tucson.....	TUS
Michigan.....	Detroit.....	MTC	California.....	Los Angeles.....	LGB
	Sault Ste. Marie.....	SRM		Oakland.....	OAK
Missouri.....	Columbia.....	CBI		San Diego.....	SDU
Wisconsin.....	Green Bay.....	GRB	Idaho.....	Boise.....	BOI
<i>Region 5</i>				Great Falls.....	GTF
Arkansas.....	Little Rock.....	LIT	Montana.....	Las Vegas.....	LAS
Louisiana.....	Burrwood.....	BRJ	Nevada.....	Medford.....	MFR
	Lake Charles.....	LCH	Oregon.....	Salem.....	SLE
	Shreveport.....	BAD	Utah.....	Salt Lake City.....	SIF
			Washington.....	Seattle.....	NEJ
				Spokane.....	GEG

Source: U. S. Weather Bureau.

The twice daily reports from the Rawin Observatories are transmitted over the United States Government Teletype Service "C" to the 222 Weather Bureau offices listed. Civil Defense officials in any locality can obtain readings by calling the Weather Bureau Office in the respective area and, with the technical instructions available, can construct fallout plots for any specified area.

FCDA has advised State and local civil defense offices to obtain the twice daily coded messages covering the area within 500 miles of their respective borders—within 1,000 miles in the winter—and to develop the ability to decode these messages and construct fallout plots. With training, a complete plot can be constructed in less than 5 minutes.

REGION AND STATE

Region 4—Continued

Indiana :
 Evansville
 Fort Wayne
 Indianapolis
 South Bend
 Michigan :
 Alpena
 Battle Creek
 Detroit
 Escanaba
 Flint
 Grand Rapids
 Lansing
 Marquette
 Muskegon
 Sault Ste. Marie
 Missouri :
 Columbia
 Kansas City
 Springfield
 St. Louis
 Wisconsin :
 Green Bay
 LaCrosse
 Madison
 Milwaukee

Region 5

Arkansas :
 Fort Smith
 Little Rock
 Louisiana :
 Baton Rouge
 Burrwood
 Lake Charles
 New Orleans
 Shreveport
 New Mexico :
 Albuquerque
 Roswell
 Oklahoma :
 Oklahoma City
 Tulsa
 Texas :
 Abilene
 Amarillo
 Austin
 Brownsville
 Corpus Christi
 Dallas
 Del Rio
 Denton
 El Paso
 Fort Worth
 Galveston
 Houston
 Laredo
 Lubbock
 Midland
 Port Arthur
 San Angelo
 San Antonio
 Victoria
 Waco
 Wichita Falls

REGION AND STATE

Region 6

Colorado :
 Denver
 Grand Junction
 Pueblo
 Iowa :
 Burlington
 Des Moines
 Dubuque
 Sioux City
 Waterloo
 Kansas :
 Concordia
 Dodge City
 Goodland
 Topeka
 Wichita
 Minnesota :
 Duluth
 International Falls
 Minneapolis
 Rochester
 St. Cloud
 Nebraska :
 Grand Island
 Lincoln
 Norfolk
 North Platte
 Omaha
 Scottsbluff
 Valentine
 North Dakota :
 Bismarck
 Fargo
 Williston
 South Dakota :
 Huron
 Rapid City
 Sioux Falls
 Wyoming :
 Casper
 Cheyenne
 Lander
 Sheridan

Region 7

Arizona :
 Phoenix
 Prescott
 Tucson
 Winslow
 Yuma
 California :
 Bakersfield
 Burbank
 Eureka
 Fresno
 Los Angeles
 Oakland
 Pomona
 Red Bluff
 Sacramento
 San Diego
 San Francisco
 Santa Maria
 Santa Rosa

REGION AND STATE

Region 7—Continued

Idaho :
 Boise
 Lewiston
 Pocatello
 Montana :
 Billings
 Glasgow
 Great Falls
 Havre
 Helena
 Missoula
 Nevada :
 Elko
 Ely
 Las Vegas
 Reno
 Winnemucca

REGION AND STATE

Region 7—Continued

Oregon :
 Astoria
 Eugene
 Medford
 Pendleton
 Portland
 Roseburg
 Salem
 Utah :
 Salt Lake City
 Washington :
 Olympia
 Seattle
 Spokane
 Walla Walla
 Yakima

SURVIVAL PLAN PROGRAM

Twenty-six contracts for developing State and local civil defense operational plans for survival from enemy attack were signed during fiscal year 1956. The contracts covered Critical Target and support areas representing 71.6 percent of the population of the United States.

States and cities participating in the program, financed wholly by Federal funds appropriated to FCDA, were: New York City, Baltimore, Philadelphia, Chicago, Kansas City, Mo., St. Louis, Baton Rouge-Shreveport-Lake Charles, La., New Orleans, Houston, Denver, Minneapolis-St. Paul, Omaha-Lincoln-Council Bluffs, Nebr., Connecticut, Maine, Massachusetts, Rhode Island, District of Columbia, Ohio, Alabama, Florida, North Carolina, Tennessee, Arkansas, Oklahoma, California, and Washington. Generally, contracts signed with these States and cities covered initial stages of the program.

The FCDA survival plan program was started in July 1955, when the 84th Congress made a \$10,000,000 supplemental appropriation available to the agency. Of that amount, \$8,300,000 was allocated to finance survival plan contracts to meet specific survival problems in the various States and cities.

The contracts require that the studies be comprehensive, and include a complete analysis of area population, command and control problems, movement capabilities of traffic and people, shelter availability, reception and care of evacuees, essential resources, and ways and means of educating and informing the public.

In addition to the survival studies, pilot studies on specific problems were conducted in several areas to provide information and techniques

to guide all survival projects. A shelter study of the Milwaukee area to determine shelter requirements and advisable construction was approved in December, and the interim report was received in March. A study of the reception and care problem in the Milwaukee area was started under a contract approved in December 1955. A census study of Milwaukee, Wis., Houston, Tex., Washington, D. C., and St. Louis, Mo., to establish the population pattern was approved in February, and the final report submitted at the end of the year. Manuals covering the findings of this study, *Population Estimates for Survival Planning*, have been published by the Bureau of the Census.

The National Opinion Research Center started a study in Milwaukee aimed at improving techniques of disseminating civil defense information through mass media. The Chicago Research Department of the American Machine & Foundry Co. and Wilbur Smith & Associates conducted studies of resources and shelter requirements against nuclear weapons. A study of road construction needed for civil defense is being made by the United States Department of Commerce. A command and control and training requirements study of Milwaukee was made by John Diebold & Associates, Inc., to determine political jurisdiction, continuity of government, and internal alerting and communications problems.

Federal agencies other than the FCDA have been allocated funds by FCDA to carry out the civil defense program in their fields, and part of this money has been assigned for work under the survival plan program. The agencies that have received funds are: Departments of Agriculture; Commerce; Health, Education, and Welfare; Interior; Justice; Labor; and the Housing and Home Finance Agency.

The FCDA survival projects office published two manuals to assist States and their political subdivisions in developing survival plans. The *Survival Plan Manual*, M27-1, and the *Survival Plan Workbook*, M27-2, define the seven principal survey projects that must be included in the plan. Two technical reports, TR-27-4, *Operation Exit*, a report on the evacuation test exercise in South Bend, Ind., and TR-27-5, *Operation Green Light*, a report based on the evacuation test exercise in Portland, Oreg., were published during the fiscal year.

State and Local Survival Plan Contracts

Contractor	Date approved	Federal funds	
		Approved	Advanced
Total.....		\$1, 542, 665	\$1, 098, 800
Region I:			
Connecticut.....	3/27/56	30, 000	30, 000
Maine.....	3/20/56	20, 000	20, 000
Massachusetts.....	4/6/56	25, 000	25, 000
New York, N. Y.....	12/17/55	108, 200	108, 200
Rhode Island.....	2/29/56	23, 500	23, 500
Region II:			
District of Columbia.....	10/31/55	12, 000	12, 000
Baltimore, Md.....	2/6/56	42, 500	42, 500
Ohio.....	3/20/56	209, 900	209, 900
Philadelphia, Pa.....	3/26/56	50, 000	50, 000
Region III:			
Alabama.....	4/30/56	23, 750	23, 750
Florida.....	2/28/56	8, 500	8, 500
North Carolina.....	6/4/56	22, 700	22, 700
Tennessee.....	4/30/56	37, 175	37, 175
Region IV:			
Chicago, Ill.....	1/19/56	49, 000	49, 000
Kansas City, Mo.....	5/3/56	25, 465	25, 465
St. Louis, Mo.....	2/8/56	41, 580	41, 580
Region V:			
Arkansas.....	3/9/56	10, 475	10, 475
Baton Rouge - Shreveport - Lake Charles, La.....	2/7/56	15, 000	15, 000
New Orleans, La.....	11/3/55	25, 500	25, 500
Oklahoma.....	1/10/56	10, 090	10, 090
Houston, Tex.....	11/18/55	192, 257	48, 064
Region VI:			
Denver, Colo.....	2/9/56	24, 400	24, 400
Minneapolis-St. Paul, Minn.....	3/9/56	20, 731	20, 731
Omaha - Lincoln - Council Bluffs (Iowa), Nebr.....	2/29/56	17, 270	17, 270
Region VII:			
California.....	3/16/56	198, 000	198, 000
Washington.....	6/15/56	67, 672	

URBAN ANALYSIS STUDIES

To develop effective local operational plans for civil defense in the event of enemy attack, FCDA, prior to the advent of the survival plan studies, provided guidance and encouraged important target areas to make thorough analyses of items such as the most probable target area, probable damage and casualties, population distribution, industrial installations, communications, transportation systems, evacuation routes, power and water facilities, medical resources, hospitals, schools, jails, zoos, fire-fighting plans, potential assembly areas, feeding and welfare facilities, topography, prevailing winds, possible shelters, and many other items. These are necessarily complex proj-

ects requiring the services and contributions of a large number of people having specific knowledge in the many fields.

A total of 46 areas has undertaken such analyses. As shown below, 12 of the reports have been completed and released. The other 34 are in various stages of completion; 15 are still in the collection-of-data stage; the data are being analyzed in 10 cases; 7 are at the report-preparation stage; and 2—Toledo, Ohio, and Wichita, Kansas,—were reviewing and editing the reports prior to release.

Studies in Process

Collection of data

Atlanta, Ga.
Dallas, Tex.
Fall River, Mass.
Flint, Mich.
Kansas City, Mo.-Kansas City, Kans.
Los Angeles, Calif.
Mobile, Ala.
Oakland, Calif.
Ogden, Utah
Portland, Oreg.
South Bend, Ind.
Sheboygan, Wis.
Topeka, Kans.
Tulsa, Okla.
Waco, Tex.

Analysis of data

Cleveland, Ohio
Detroit, Mich.
Philadelphia, Pa.

Analysis of data—Continued

Rochester, N. Y.
Hampton-Newport News, Va.
Jersey City, N. J.
Norfolk-Portsmouth, Va.
Seattle, Wash.
Shreveport, La.
Springfield, Mass.

Preparation of report

Akron, Ohio
Denver, Colo.
Fort Worth, Tex.
Lynn, Mass.
Wilmington, Del.
Worcester, Mass.
Youngstown, Ohio

Review and editing of report

Toledo, Ohio
Wichita, Kans.

NOTE.—All of the above cities are in Critical Target Areas except Mobile, Ala.; Ogden, Utah; Topeka, Kans.; Waco, Tex.; Tulsa, Okla.; Shreveport, La.; and Sheboygan, Wis.

Reports Released

City	Month released
San Francisco, Calif.	February 1951
Baltimore, Md.	March 1951
Washington, D. C.	June 1951
U. S. Capitol—Supreme Court and Congressional Buildings.	October 1951
Dayton, Ohio.	November 1951
Boston, Mass.	February 1953
New Orleans, La.	November 1953
St. Louis, Mo.	February 1954
Milwaukee, Wis.	July 1954
Houston, Tex.	July 1954
Grand Rapids, Mich.	June 1955
Columbus, Ohio	February 1956

RESEARCH AND DEVELOPMENT

FCDA is authorized by the Federal Civil Defense Act of 1950 to conduct research and to study and develop civil defense measures designed to protect life and property. Little research is done directly by the FCDA staff. Most of it is carried on as specific research projects under contract with various universities and specialized research organizations. These projects cover a variety of fields such as the testing of materials, weapons effects, development of damage assessment techniques, development of shelters, studies of Natural disaster problems, fire-fighting techniques, population movements, and public opinion surveys.

During fiscal year 1956 the funds obligated by FCDA for these research projects totalled \$1,996,451. A list and brief description of the projects in process as of June 30, 1956, follows.

Projects in Process

Starting date	Project and contractor	Scheduled completion date	FCDA funds obligated fiscal year 1956
1954	<i>Scientific Advisory Committee.</i> —Established at request of FCDA by the National Academy of Sciences in 1954, this committee, supported by FCDA funds on a continuing basis to advise on a variety of scientific and technical problems. Its members are leading scientists in a variety of fields who serve without pay.	continued	\$40,000
April 1952	<i>Chemical Warfare Defense—Chemical Corps, Department of Army Contract.</i> —Development and testing of infant protector and civilian type protective masks.	do	\$7,500
August 1953	<i>Civil Defense Atomic Test Programs.</i> —Parts 2 and 3—Development and execution of a continuing atomic test program as related to civil defense requirements, including observer participation, civil defense trainee participation, and technical tests. Operation Cue, a part of the AEC test series in Nevada in the spring of 1955, was a result of this program. Plans are now being prepared for Part 3 sometime in 1957.	do	0
June 1954	<i>Damage Assessment and Reporting—Stanford Research Institute.</i> —A program to develop immediate and specific information on attack damage to population, housing and other facilities, and resources. Emphasis is being placed on mechanization of fallout analysis, development of a computation system for evacuation analysis, and compilation of various data required. Development of computations for bomb damage has been completed. When perfected the system will be important for national planning, postattack operations, and war games.	do	200,000
June 1953	<i>Disaster Studies—Committee on Disaster Studies, National Research Council.</i> —Part 1—Field investigations of current peacetime disasters to develop information useful to civil defense in both peacetime and wartime disaster situations.	do	0
September 1955	<i>New England Disaster Study—Bureau of Applied Research, Columbia University.</i> —This evacuation study, recommended by the Committee on Disaster Studies of the National Research Council, relates to large-scale evacuation in the New England area, necessitated by the flood situation and with the problems arising from temporary housing and care, and doubling up with relatives or friends.	July 1956	12,000

Projects in Progress—Continued

Starting date	Project and contractor	Scheduled completion date	FCDA funds obligated fiscal year 1956
November 1955.....	<i>Fire Research Committee—National Academy of Sciences.</i> —The functions of this committee are to explore all means and methods for the prevention, extinguishing, and control of large-scale fires. Emphasis is on new and novel procedures and methods with the objective of recommending a basic research program in this field for implementation by FCDA.	continued.....	30,000
Do.....	<i>Climatological Survey—United States Weather Bureau, Department of Commerce.</i> —A comprehensive climatological study of fallout probabilities. The purpose of the survey is to aid in planning evacuation studies, location of stockpiling sites, and assuring well-founded operational plans. The final report will indicate geographical probabilities of fallout by seasons and areas around target areas in the United States, its Territories, and southern Canada.	August 1956.....	75,000
Do.....	<i>Operational Communications System—Stanford Research Institute.</i> —The objectives of this research are to provide an attack surveillance system to communicate information on such factors as location of ground zero, weapons size, and height of burst, to a computer center which will be an integral part of the damage assessment system. The first phase will concentrate on systems analysis, preliminary specifications for surveillance instrumentation, requirements for communications network, and establishing the cost of an operating system.	November 1956.....	300,000
Do.....	<i>Medical Research—National Academy of Sciences:</i> a. <i>Blood Research.</i> —Funds for this project have been transferred to the Department of Defense to support a continuing contract relating to blood research, plasma, volume expanders, and nasogastric feedings. b. <i>Plasma Sterilization.</i> —A direct contract authorizes a project on the sterilization of blood plasma for the elimination of the transmission of jaundice.	Continued.....	15,000
December 1955.....	<i>Public Attitude Survey—Survey Research Center of the University of Michigan.</i> —A field survey to show current public thinking with regard to various civil defense topics. This will bring a 1954 study up to date.	December 1956.....	69,00
Do.....	<i>Shelter Research—Ionizing Radiation—National Bureau of Standards, Department of Commerce.</i> —One of the larger initial undertakings will be a study of the attenuation of nuclear radiation by structures.	Continued.....	16,500
June 1956.....	<i>Shelter Design—American Machine & Foundry Co.</i> —Design of a 150-foot span reinforced-concrete dome-type shelter with the capacity to house about 3,000 persons for several days or longer.	December 1956.....	35,630
February 1956.....	<i>Public Communications System—Audio-sound System—Dukane Corp.</i> (1) Development of four prototype model transistor amplifiers for the wire line control system for mobile, portable, and fixed applications. The objectives are to reduce the weight and power supply requirements to simplify maintenance, to increase the life expectancy, to increase portability, and to reduce cost of civil defense public address units. (2) Development of specifications for a light-weight portable public address system suitable for unit alertment. Also recommendation for equipment usage as various priorities and sound conductivity, development of speech techniques for best intelligibility; and development of service usage techniques in civil defense situations.	July 1956.....	89,750

Projects in Progress—Continued

Starting date	Project and contractor	Scheduled completion date	FCDA funds obligated fiscal year 1956
February 1956.....	<i>Public Communications System—Continued.</i> (3) An engineering survey and application of wire line control system in Gary, Ind., using presently available and commercially produced sound equipment. To provide technical guidance to cities and States relative to the installation of equipment presently available.		
December 1955.....	<i>Home Warning Devices:</i> A. <i>Superimposed Powerline Signal Systems:</i> 1. <i>Powerline Harmonic System—Midwest Research Institute.</i> —Research on a voltage reduction signal system to be used on electric power distribution systems. The original voltage dip method has been found to have technical and practical difficulties. Eight different types of signals have been explored. The original scope of the contract has been revised and extended, and present emphasis is on a harmonic voltage system.	October 1956.....	49,883
April 1956.....	2. <i>Overall Investigation—Armour Research Foundation.</i> —An overall study of powerline warning systems making use of superimposed signals over a wide range of frequencies. It will cover the general properties of warning systems and the generation and transmission of the warning signal. It will include comparative study of home warning devices presently developed or being considered, as well as the preliminary design of a warning system based on the optimum superimposed signal.	do.....	39,557
Do.....	3. <i>Prototype \$200 Cns. System—International Business Machines Corp.</i> —Development of an internal warning system for the purpose of generating and receiving a civil defense alert signal. The contractor will furnish FCDA with receivers and necessary transmitting equipment for installation.	do.....	39,289
May 1956.....	4. <i>Hom-A-Lert System—Allis-Chalmers Co.</i> —Development, production, and testing of an internal warning system including generating equipment, wave-trap equipment, and signal receivers to be installed and tested in Cincinnati.	September 1956.....	47,276
Do.....	B. <i>Telephone Signalling System—Armour Research Foundation.</i> —Development of a warning system based on telephone system signaling. It will include an analysis of the switching techniques used by Bell and independent telephone companies, study of methods of communicating an alarm to telephone system subscribers, and development of a prototype alarm system to be installed in a typical telephone central office.	February 1957.....	24,918
Do.....	5. <i>Prototype CONELRAD Alert Receivers—Philco Corp.</i> —Development of three prototype radioreceivers actuated by various sequences based on CONELRAD Alert procedures. The contract seeks to develop a simple, low-cost alarm receiver for use by the public.	October 1956.....	24,918

Projects in Process—Continued

Starting date	Project and contractor	Scheduled completion date	FCDA funds obligated fiscal year 1956
March 1956.....	Warning and Communications Systems Studies: A. Overall Communications Study—Melpar Corp. —A study program of civil defense communications in that period between the warning and the delivery of the weapons with particular emphasis on the requirements of survival procedures. (1) A survey of alarm communications from and including the key points down to the citizen to be warned. Recommendations will be made for the design of an optimum alarm communications system based on economic, engineering, and political factors. (2) An evaluation of the existing CON-ELRAD system with recommendations for improvement or better alternative procedures if CON-ELRAD is found inadequate. (3) A survey of the entire civil defense communications problem from the first alert down to the public, broadcasting of intelligence and instructions before and after attack, establishing and maintaining coordination between civil defense leaders and workers, and communications among civilians after an attack.	March 1957.....	49,145
April 1956.....	B. Warning Study, by Specific States—Gautney & Jones Co. —A study of the effectiveness of the existing facilities from the Air Division through the key points down to the local level, to be conducted in Maryland and Pennsylvania.	November 1956.....	33,500
March 1956.....	Radiological Defense System—University of California. —A study aimed at the development of a National Radiological Defense System. Will include intensive fact-finding, review, analysis, recommendations or further research on such items as: fallout patterns and predictions; shelter cover; radiological instrumentation; communications systems; mass radiation injury diagnosis and treatment; and ingestion hazards.	March 1957 but will continue.	591,600
June 1956.....	Public Education and Training: A. Local Civil Defense Organization Effectiveness—Political Science Department of the Michigan State University. —A comparative study of types of civil defense organizations currently operative in States, cities, counties, and metropolitan target complexes. The following aspects will be analyzed: formal organization of the specific agency, its external relations with other organizations, its internal relations, and its community relations. Training materials will be prepared, jurisdictional problems will be pointed out, the factors associated with effective civil defense programs will be specified.	November 1956.....	33,944
May 1956.....	B. Evaluation of Local Civil Defense Training Effectiveness—Applied Psychological Services, Villanova, Pa. —Development of the means and instruments for the evaluation of the effectiveness of civil defense training.	February 1957.....	24,964

Projects in Process—Continued

Starting date	Project and contractor	Scheduled completion date	FCDA funds obligated fiscal year 1956
June 1956.....	Public Education and Training—Continued. ing at various levels. For use by all levels of civil defense organizations. C. Effectiveness of Civil Defense Information Media—Group Attitudes, Inc., New York, N. Y. —Interviews with key local civil defense personnel, and with selected influence groups to determine their evaluation of the effectiveness of civil defense public information media, news releases, radio, TV, etc. Analysis of interview results is intended to develop the "what" and "why" of the effectiveness of the various media used by FCDA.	November 1956.....	39,000

NATURAL DISASTERS

Nearly \$22 million was allocated to the States as Federal assistance in 26 major natural disasters during fiscal year 1956. Since enactment of Public Law 875, on September 30, 1950, the Congress has appropriated more than \$84 million for Federal disaster assistance, and the President has authorized a net allocation of more than \$64 million in disaster funds. A total of \$34,500,000 was made available by the 84th Congress for disaster purposes.

In Executive Order 10427 dated January 16, 1953, the President conferred authority upon FCDA to direct and coordinate Federal assistance in major natural disasters as set forth in Public Law 875.

From the time responsibility for natural disaster operations was assigned to FCDA until the natural disaster office was established, operations were directed by a small staff that reported directly to the assistant administrator, operations control services.

After the northeast and west coast floods in the fall of 1955 and early 1956, it was recognized that additional staff was necessary. A separate disaster office therefore was established by the Administrator of FCDA.

Approval by FCDA Administrator Val Peterson of General Order 232, on February 16, 1956, established a natural disaster office at the National Headquarters of the Federal Civil Defense Administration, Battle Creek, Mich. The order also outlined the functions of the office in fulfilling the responsibility of FCDA for direction, coordination, and control of Federal assistance to State and local governments in areas of major natural disasters.

The natural disaster office is headed by a director, who reports to the assistant administrator, operations control services, FCDA.

A nucleus staff of disaster specialists is assigned permanently to the Office, and in natural disaster emergencies personnel from other offices and services of FCDA National Headquarters are called upon, as the need requires, to assist the regular staff.

General Order 232 states that, "The Natural Disaster Office will * * * provide technical advice and guidance on natural disaster operations to other Federal agencies, FCDA Regional Offices, local (including State) political subdivisions, and nongovernmental groups * * *." Detailed functions are then outlined.

Specialists who may be assigned to natural disaster duty include those in the following fields: communications, meteorology, supply, transportation, audit, engineering, medical, welfare, industrial protection, safety, public information, planning, and law.

Since establishment of the office, much effort has been directed toward further simplifying procedures for setting Federal disaster assistance in motion—quickly, and without duplication of Federal effort.

Major Natural Disasters, Fiscal Year 1956

The two most damaging natural disasters during fiscal year 1956 were hurricane and floods that struck the east coast in August, 1955; and floods in California in December of 1955. Welfare needs were probably the highest in the history of the Nation. Industry and transportation were paralyzed; power and communications cut off; and thousands of persons were homeless and in want.

An indication of the scope of Federal disaster relief activities may be seen in the fact that Federal agencies involved in the floods of August 1955 included FCDA; the Department of Agriculture's Agricultural Marketing Service, and Farmers Home Administration; the Department of Commerce's Bureau of Public Roads, and Maritime Administration; the Army Corps of Engineers; the Department of Health, Education, and Welfare's Public Health Service, and Food and Drug Administration; the Housing and Home Finance Agency's Public Housing Administration, Federal Housing Administration, and Federal National Mortgage Association; the Department of Labor; the Small Business Administration; the Department of the Treasury, and the Department's Coast Guard, and the Internal Revenue Service; the Office of Defense Mobilization; and the General Services Administration.

In the floods in California in December 1955, FCDA set up Inter-agency Centers at strategic points in the disaster areas to coordinate Federal disaster relief. Twenty-three Federal agencies and the American National Red Cross were represented at the Interagency Centers.

MAJOR NATURAL DISASTERS, FISCAL YEAR 1956

Date of declaration	Area	Nature of disaster	Presidential allocation
Aug. 13	North Carolina	Hurricane	\$3, 271, 000
15	New Mexico	Flood	120, 360
20	Pennsylvania	Hurricane and flood	1, 020, 000
20	Connecticut	do	1, 020, 000
20	Massachusetts	do	1, 020, 000
20	New Jersey	do	1, 020, 000
20	Rhode Island	do	1, 020, 000
20	South Carolina	do	1, 020, 000
22	New York	Hurricane	408, 000
Dec. 22	Alaska	Hurricane and flood	510, 000
23	California	Severe hardship	25, 500
24	Nevada	Flood	9, 735, 000
29	Oregon	do	378, 600
Feb. 25	Washington	do	1, 384, 000
Mar. 15	Pennsylvania	do	257, 500
29	New York	do	51, 500
Apr. 5	Michigan	Tornado	51, 500
7	Oklahoma	do	139, 050
9	Tennessee	do	66, 950
18	Alabama	do	
21	Idaho	Threatened flood	206, 000
24	North Carolina	Severe storm	206, 000
May 17	Ohio	Windstorm	
21	Pennsylvania	Storm	
June 12	Colorado	Flood	51, 500
23	Missouri	Water shortage	
Total			137, 410, 205

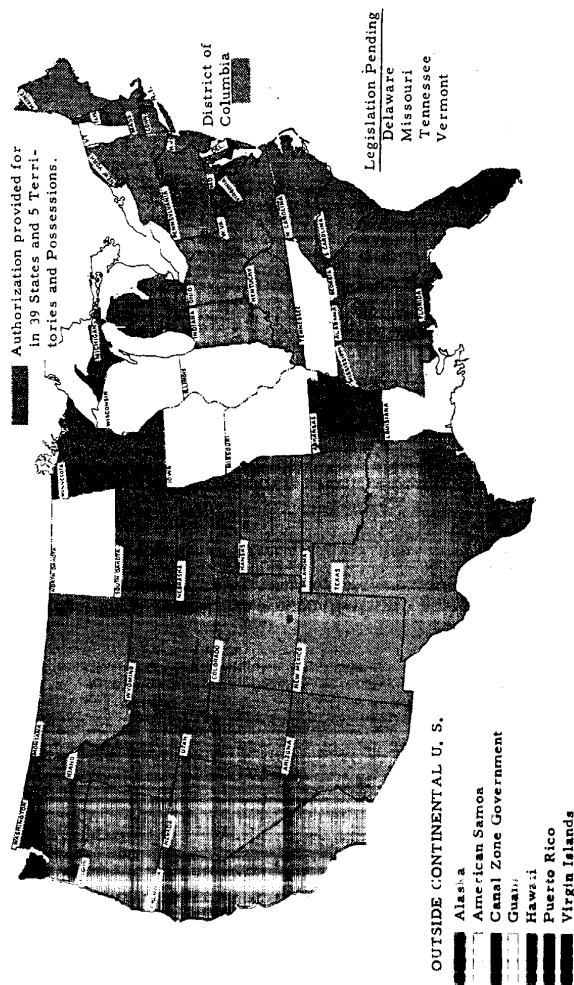
¹ The Army Corps of Engineers expended \$31,600,000 for disaster assistance in the New England floods of 1955, under direction of FCDA Disaster Order No. 1. The amount was to be refunded later by Congressional appropriation direct to the Corps.

The natural disaster office organized and distributed to the field an interim administrative manual that details the types of Federal assistance available to State and local governments in time of major natural disaster; the manner in which to secure such assistance; rules, regulations, and procedures of FCDA governing the assistance available; and other pertinent information. The manual was prepared in loose-leaf form for easy revision.

Technical personnel of the natural disaster office and instructors of the FCDA Staff College cooperated in developing a 5-day course to inform and train persons regarding Federal assistance available in time of natural disaster. One 3-day course for selected FCDA personnel was given at the National Headquarters of the Federal Civil Defense Administration, at Battle Creek, Mich., in June. The expanded 5-day course will be presented to the public for the first time in November 1956.

A report was prepared during the fiscal year by the Natural Disaster Office for use by FCDA Administrator Val Peterson in support of proposed Federal legislation to provide flood insurance. The 84th

FIGURE 6. CIVIL DEFENSE FORCES AUTHORIZED BY STATE LAW TO COMBAT
NATURAL DISASTERS
JUNE 1956



Congress later enacted Public Law 1016, known as the Federal Flood Insurance Act of 1956. Besides providing protection from flood loss, the law requires a study and report on insurance needs against other natural disaster perils.

State Authorization for Civil Defense Action in Natural Disasters

During the fiscal year, FCDA continued to recommend that State civil defense agencies be given the authority to coordinate natural disaster activities within a State. The goal has nearly been reached. Most States have already taken such action; others have set up separate authority for enemy-caused and natural disasters; and still others have emergency authority vested in an existing government department.

The map (fig. 6) shows the States in which civil defense forces are authorized by State law to take action in natural disasters. By the end of the fiscal year, 39 States, the District of Columbia, and five Territories or possessions had enacted legislation authorizing civil defense forces to act in time of natural disaster. Of the nine remaining States, such legislation was pending in Delaware, Missouri, Tennessee, and Vermont.

Work in natural disasters has provided excellent training for civil defense personnel in leadership, organization, and use of technical skills. And on the other hand, civil defense organization and training has increased the capability of personnel to give effective assistance in natural disasters.

DELEGATIONS PROGRAM

The Federal Civil Defense Act of 1950 authorizes the FCDA Administrator to "delegate, with the approval of the President, to the several departments and agencies of the Federal Government appropriate civil defense responsibilities, and review and coordinate the civil defense activities of the departments and agencies with each other and with the activities of the States and neighboring countries." Under this authority the Administrator has issued four delegations, as follows:

Delegation No. 1, approved by the President July 14, 1954, delegated to the Secretary of Health, Education, and Welfare 10 specific duties dealing principally with health and welfare problems under attack conditions, development of civil defense training materials for incorporation in the curricula of schools and colleges, and the development of shelter and protective measures for educational institutions,

Delegation No. 2, approved September 8, 1954, assigned duties to several agencies:

To the Secretary of Agriculture were delegated three responsibilities dealing with control or eradication of diseases, pests, or chemicals used in biological or chemical warfare against animals or crops, the planning of emergency food supplies, and the prevention and control of fires caused by enemy attack in rural areas.

To the Secretary of Commerce were delegated responsibilities for designation of civil defense emergency highways, coordination of interstate and State civil defense highway systems, emergency clearance and restoration of highways, streets, and bridges in damaged areas, traffic control problems during an emergency, and the provision of data and assistance to the States in analyzing potential target and support areas.

To the Secretary of Labor were delegated responsibilities for planning emergency use of the labor force, estimating survivors by occupational and social characteristics, coordination of the nationwide employment service offices for determining manpower requirements and for recruiting purposes, developing methods of compensation for authorized workers in an emergency, the provision of compensation payments for the injury or death of authorized workers during an emergency, and a plan for provision of temporary aid to workers during periods of idleness resulting from enemy action.

The Attorney General was given a delegation for guiding the States in the protection of penal institutions and the control and utilization of prisoners and facilities during an emergency.

To the Housing and Home Finance Administrator were delegated responsibilities for developing protective standards for new housing and temporary shelter in existing housing, provision of temporary emergency housing in support of attacked areas, and plans for the emergency restoration of housing and community facilities coming under the agency's jurisdiction.

Delegation No. 3, approved August 13, 1955, gave further responsibilities to the Secretary of Commerce, namely, the planning of needed highway improvements to meet civil defense requirements, and the development and current issuance of improved forecasts of radiological fallout patterns. This delegation also gave to the Secretary of the Interior the task of planning and providing adequate fuel supplies to attacked areas and reception centers.

Delegation No. 4, approved by the President November 22, 1955, gave to the Secretary of the Interior the responsibility for emergency restoration of electric utility service to attacked areas and the provision of adequate electric utility service to support areas.

As of June 30, 1956, most of the agencies had made progress toward carrying out their delegated responsibilities, but progress was limited in some cases due to the lack of funds.

The delegate agencies obligated a total of \$1,478,680 for these civil defense programs in fiscal year 1956. The agencies requested a total of \$6,656,000 for these functions in fiscal year 1957 and Congress appropriated \$4,000,000. Funds available for fiscal year 1957 were allocated to the various agencies as shown in the table, Civil Defense Funds of Delegate Agencies.

Program Progress

Agency	Delegation	Progress
DEPARTMENT OF AGRICULTURE	<i>Agricultural Research Service</i>	
	Plan a national program and direct Federal activities concerned with research, diagnosis, strengthening of defensive barriers, and control or eradication of diseases, pests, or chemicals introduced as agents of biological or chemical warfare against animals and crops.	A series of 2-day meetings were held in various States with veterinarians, livestock sanitary officials, college veterinary faculties and others on the recognition and handling of foreign animal diseases including emergency plans for coping with outbreaks. A total of 107 regional meetings have been held on disease problems and control programs. Work is progressing on developing new diagnostic techniques and improving performance and control procedures.
	<i>Agricultural Marketing Service and Commodity Stabilization Service</i>	
	Plan and direct Federal activities, and provide technical guidance to States, in connection with an overall food program aimed at maintaining adequate emergency food supplies for attack or support areas.	A guidebook for food processing and distributing establishments presenting factors for reducing vulnerability of industrial food plants has been developed and is being distributed for comment to trade associations and other industry representatives. A proposed set of guidelines for determining food and food facility resources in reception areas is being developed. A draft of an order prescribing the general rules of a good priority system has been developed and is being reviewed. Development of a course in radiological training for inspection personnel to assist in identifying radioactive foods and processing equipment is being studied. Emergency processing storage and distribution methods are being studied.
	<i>Forest Service</i>	
	Plan a national program, direct Federal activities, and provide technical guidance to States concerned with the prevention and control of fire caused by enemy attack in rural areas of the United States.	State committees for Rural Fire Defense planning have been established, assignments have been made, and the inventory, operating procedure, and correlation phases of plans have been partially completed for the wild lands. Plans are being made to establish regional level (CD) rural fire defense committees. One civil defense regional meeting on fire defense planning has been held and two more are scheduled. Supplemental guidelines containing new principles and schedules have been developed by the National Rural Fire Defense Committee as an aid to regional and State committees.

Program Progress—Continued

Agency	Delegation	Progress
DEPARTMENT OF COMMERCE	<i>Bureau of Public Roads</i>	<p>A revised draft of the preliminary report on civil defense highway needs has been completed and is being reviewed.</p> <p>A standard design for evacuation route signs was recommended.</p> <p>A manual has been prepared discussing techniques to be used in evacuation planning and full utilization of highway systems in an emergency.</p> <p>Official civil defense program assistance has been established in the Commissioner's office.</p> <p>A conference has been held for orientation and instruction required to determine the highway needs for evacuation.</p>
	<i>U. S. Weather Bureau</i>	<p>Since June 1955 coded fallout messages have been transmitted twice daily on teletypewriter circuits. When decoded and plotted, these yield fallout bulletins for 52 locations covering the entire country. The 500 drops on the circuit insure messages being available to all required officials and industrial groups. A simplified coding procedure was put into effect so that local civil defense personnel could decode the forecasts with accuracy.</p> <p>Arrangements have been concluded with the Canadian Government to provide the same information in twice daily forecasts from eight locations in southern Canada. Honolulu and Alaska also report daily fallout forecasts.</p> <p>Work continued on the establishment of a fallout standard. Tabulation and analysis of data has been completed. Working up trajectories of particles from these is now in progress.</p> <p>A survey was conducted by the Weather Bureau Central Office to determine the use being made of the fallout messages. Tabulated results have been given to FCDA National and regional offices.</p> <p>Experimental work in the use of an analogue computer to produce fallout forecasts is being done.</p> <p>Full time meteorologists have been assigned to FCDA National and regional offices.</p> <p>A brief study of the reliability of persistence assumptions in fallout predictions for a summer and winter situation has been made.</p> <p>Templates from mean wind charts for extrapolating soundings to accommodate the UF network have been prepared for winter and spring conditions. The remaining ones are being prepared.</p>
	<i>Area Development</i>	<p>Nothing has been done due to lack of funds.</p>
		<p>Provide data and assist the States in conducting analysis of potential target and support areas for the purpose of providing basic statistics and maps essential to the completion of Federal, State, and local civil defense operating plans.</p>

Program Progress—Continued

Agency	Delegation	Progress
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE	<i>Public Health Service</i>	<p>Projects on the rapid identification of biological warfare agents are under way. A report summarizing available information on potential chemical warfare agents is being prepared.</p> <p>Data on public water supply facilities developed in the bomb damage assessment studies were forwarded to FCDA.</p> <p>Ten nationally known waterworks experts have been appointed consultants to PHS to advise on the essential municipal water supplies in defense emergency and natural disaster.</p> <p>Training courses on public health in civil defense have been given in Pennsylvania, Maryland, Texas, Oklahoma, Massachusetts, Virginia, Maine, Washington, and Louisiana.</p> <p>A course entitled "The Role of the Public Health Laboratory in Civil Defense" was given to a group of key laboratory personnel from 8 States.</p> <p>Staff members participated in many courses, meetings, and conferences for the purpose of presenting material on the various aspects of civil defense.</p> <p>The strength of the Commissioned Reserve Pool of Professional Personnel was 2,263 on Mar. 31.</p> <p>Fifty commissioned reserve officers attended the fourth headquarters course on "Public Health Activities in National Emergencies."</p> <p>A course on "Epidemiology in Civil Defense" has been developed for presentation to commissioned reserve physicians.</p> <p>Three sanitary engineer officers were given orientation and training and assigned to full-time civil defense work in DHEW Regions III, IV, and IX.</p> <p>An emergency operations plan and a natural disaster relief operations plan are being prepared.</p> <p>Courses, lectures, and training materials for "Sanitary Engineering Problems in CD Disaster" have been prepared and used in a pilot course conducted at the Sanitary Engineering Center. It was also given in Salt Lake City, Utah.</p> <p>Plans are being developed to assist deans of the medical schools in solving civil defense problems.</p>
		<p>Plan a national program, develop technical guidance for States, and direct Federal activities concerned with financial assistance for the temporary relief of aid of civilians injured or in want as the result of attack.</p> <p>Plan, program, and develop technical guidance for the States and direct Federal activities concerned with the acquisition, transportation, and payment for clothing of civilians in want as a result of attack.</p> <p>Plan a national program, develop technical guidance for States, and direct Federal civil defense activities concerned with research with respect to, and detection, identification, and control of: (1) communicable diseases in humans, (2) biological warfare against humans, (3) chemical warfare against humans, and (4) other public health hazards.</p> <p>Plan, develop, and direct Federal activities concerned with a national program designed to provide Public Health Service reserve professional personnel from support areas to those damaged by enemy attack.</p> <p>Plan, develop, and distribute through appropriate channels, training materials for incorporation in the curricula of schools and colleges throughout the United States in order to integrate the teaching, in all possible courses, of civil defense skills, and knowledge and fundamentals of behavior during emergencies.</p> <p>Plan, develop, and distribute, through appropriate channels, technical guidance concerning the provision of shelter and other protective measures designed to minimize injury to personnel and reduce damage to vital components of educational institutions and hospitals and of water, sewer, and other public health facilities.</p> <p>Plan a national program, develop technical guidance for States, and direct Federal activities concerned with the emergency restoration of community facilities essential to health or functional components thereof for which the Public Health Service normally has regular operating programs.</p> <p>Plan a national program, conduct research, develop technical guidance for States, and direct Federal activities designed to meet the extraordinary needs for food and drug inspection and control in attacked areas.</p> <p>During a civil defense emergency, employ temporarily additional personnel without regard to the civil service laws and incur such obligations on behalf of the United States as may be required to meet the civil defense requirements of an attack or of an anticipated attack.</p> <p>Disseminate such civil defense information as may be approved from time to time by the Federal Civil Defense Administration.</p>
		<p><i>Social Security Administration</i> (Bureau of Public Assistance)</p> <p>Considerable time has been spent in discussing and defining major policy fields falling under the Department's delegations.</p> <p>A manual for instruction and guidance is being prepared. A condensed version of policies and procedures to be included in it has been released to the States.</p> <p>A committee on emergency clothing, representing leaders in the retail clothing field, professional associations and Federal agencies, has been selected and is scheduled to meet in the fall.</p> <p>Material for estimates of clothing resources in the Milwaukee Area was prepared and a method for estimating these resources has been worked out.</p> <p>Material for a special FCDA Staff College welfare course has been developed.</p>
		<p>Plan a national program, develop technical guidance for States, and direct Federal activities concerned with financial assistance for the temporary relief of aid of civilians injured or in want as the result of attack.</p>

Program Progress—Continued

Agency	Delegation	Progress
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE—CON.		<p><i>Social Security Administration—Con.</i></p> <p>Extensive work has been done to encourage the participation of national private agencies and professional associations in planning for the delegated programs, including the appointment of a temporary consultant to deal exclusively with the matter.</p> <p>Agreements with the States are being signed which will form a basis for the planning of the emergency financial assistance and clothing programs and will provide authority for them to operate in an emergency.</p> <p>A memo of understanding has been drawn up and widely distributed covering:</p> <ol style="list-style-type: none"> The payment of financial assistance during an emergency is 100 percent Federal responsibility. State Public Welfare Offices will be the focal point around which delegated welfare functions will take place. BPA will work with State Public Welfare Departments. <p>Defense welfare planning material has been received from 46 States.</p> <p>Tentative criteria and cost tables have been so developed for a 50-50 matching with the States on administrative costs for planning defense warfare services.</p> <p><i>Office of Education</i></p> <p>Civil defense pilot project centers have been established by agreements with California, Connecticut, and Michigan State departments of education to work out methods and material for introducing civil defense instruction into the curriculum. Requests have been received from each of the centers for the continuation of the pilot projects in 1957, with emphasis on general adult education.</p> <p>A publication, <i>Education for National Survival</i>, incorporating the best features of bulletins of the three State pilot project centers, was being printed at the end of the fiscal year. It will be distributed nationally through regular educational channels.</p> <p>A total of 46 States and 6 Territories have established civil defense coordinators in their respective departments of education to work with local schools in developing and coordinating civil defense educational progress.</p> <p>Information sheets have been developed specifically for educators based on civil defense technical information; 36 have been published to date.</p> <p><i>Food and Drug Administration</i></p> <p>The preliminary report on tests of food at Nevada has been published. The final report has been declassified and is being printed.</p> <p>Reports on the extent of penetration of bacterial agents into foods in wholesale bottlers and on gaseous decontamination of small lots of critical foods and drugs have been completed.</p> <p>FDA training program for State and local food and drug officials has reached 33 cities and more than 1,000 people have received certificates of attendance.</p> <p>Work is in progress on a revision of the training handbook <i>Civil Defense Information for Food and Drug Officials</i>, to include new material and improvements suggested by experience.</p>

Program Progress—Continued

Agency	Delegation	Progress
DEPARTMENT OF THE INTERIOR	Office of Minerals Mobilization	<p>Plan and direct Federal activities designed to procure, store, transport, and distribute adequate fuel supplies to attacked areas and reception centers, consistent with the national emergency fuel program.</p> <p>Conferences were held with State Civil Defense Directors in three States and detailed plans of operations developed to integrate the national program of fuels distribution into the local organizational setup.</p> <p>Plans are being developed for establishing regional and local area distribution managers for fuel. Initial contact with industry representatives and coordination meetings with some regional administrators have been arranged.</p>
	Office of Oil and Gas	<p>Same as above.</p> <p>A preliminary survey of five FCDA regions and a representative group of States was undertaken to determine what was being done to cope with petroleum and gas problems in a civil defense emergency.</p>
	Assistant Secretary for Water and Power Development	<p>Plan a national program, provide technical guidance to the States, and direct Federal activities concerned with the emergency restoration of electric utility service to attacked areas and provision of adequate electric utility service to support areas.</p> <p>Meetings have been held in 14 sections of the country to enlist cooperation and support of the utilities. All of the United States was covered.</p>
DEPARTMENT OF JUSTICE		No report.
DEPARTMENT OF LABOR	Activity No. 1	<p>Plan and develop a national program relating to the utilization of the labor force during a civil defense emergency, consistent with the responsibilities of the Department of Labor with respect to manpower mobilization.</p> <p>A regional conference on manpower and postattack mobilization was held in Boston, covering Maine, New Hampshire, Vermont, Rhode Island, Massachusetts, and Connecticut.</p> <p>A plan for the organizing and training of a task force trained in civil defense skills so that they can quickly be shifted to civil defense jobs in an emergency has been drafted and is being discussed. Pilot operations will be undertaken.</p> <p>Identification and description of key skills needed for civil defense is being undertaken with New York State civil defense.</p>
	Activity No. 2	<p>Conduct research and provide a method of estimating survivors by occupational and social characteristics, and for determining their availability for employment during a civil defense emergency.</p> <p>Work has been started to determine and provide the basic data on population and work force characteristics for use in the electronic damage assessment system.</p> <p>Rough outlines of the types of information to be collected on the spot in a post-attack period have been developed.</p>
	Activity No. 3	<p>Provide technical guidance to the States and direct Federal activities concerned with coordination of the nationwide system of employment service offices for determining requirements of, and recruiting, referring, and utilizing workers to meet civil defense needs.</p> <p>All field offices have received interim instructions and procedures to follow in an emergency. Some elements of these procedures have been tested in practice exercises and flood disasters.</p> <p>Planning is in progress to develop coordinated technical guidance for State employment service emergency activities.</p> <p>Standards on defense manpower plans are being developed for inclusion in agreements between State employment services and State civil defense agencies.</p> <p>A study of the New York State civil defense program is under way to determine its suitability for developing standards for other State agencies in setting up necessary organization and occupational structures for emergency recruitment, selection, referral, and allotment of manpower.</p>

Program Progress—Continued

Agency	Delegation	Progress
DEPARTMENT OF LABOR—continued	<i>Activity No. 4</i>	
	Plan a national program, develop technical guidance for the States, and direct Federal activities concerned with the methods of compensation for authorized workers in a civil defense emergency, with the provision of compensation payments for the injury or death of authorized workers while engaged in civil defense activities, and with financial assistance for temporary aid to members of the labor force during periods of idleness due to destruction of working places through enemy action.	Drafts of plans covering each of these three problems have been prepared and discussed with the Labor Advisory Committee on Civil Defense.
HOUSING AND HOME FINANCE	Conduct research and provide technical guidance to the States concerning protective standards for new housing construction and temporary shelter in existing housing facilities. Plan a national program, provide technical guidance to the States, and direct Federal activities concerned with the provision of temporary emergency housing in support of areas subjected to enemy attack, and with the emergency restoration of essential housing and those related community facilities damaged by enemy action for which the agency normally has legal responsibility.	Defense planning committees have been appointed in each constituent agency and unit, as recommended by the EHFA Defense Council. The effects of the nuclear explosion at Nevada in 1956 on residential structures exposed are being studied. Proposals have been submitted for nuclear tests of dwelling units.

Civil Defense Funds of Delegate Agencies

Delegate agency	Amount of funds		
	Transferred by FCDA for fiscal year 1956	Obligated during fiscal year 1956	Transferred by FCDA for fiscal year 1957
Department of Agriculture			\$325, 000
Department of Commerce	\$190, 000	\$163, 813	555, 000
Department of Health, Education, and Welfare	1, 240, 000	1, 214, 794	2, 340, 000
Department of the Interior	20, 000	10, 328	70, 000
Department of Justice			60, 000
Department of Labor	65, 000	64, 252	300, 000
Housing and Home Finance	25, 000	24, 853	350, 000
Total	1, 540, 000	1, 478, 040	4, 000, 000

WOMEN'S ACTIVITIES

Throughout the year FCDA continued to establish contacts and working programs with over 100 women's organizations representing a total membership of 27,000,000 American women.

Some of their activities in fiscal year 1956 follow.

Regional directors of women's activities held a 3-day conference at FCDA headquarters in July, to discuss the work pattern for the year.

The national essay contest sponsored by the Veterans of Foreign Wars Auxiliary, in which over 30,000 high school students throughout the Nation wrote on the subject "What Civil Defense Means to Me," was completed in September.

A food writers' conference was held at FCDA Headquarters in October and a special emergency mass feeding demonstration was put on by Region IV for those in attendance. Many newspaper articles on emergency feeding and emergency food supplies resulted from this conference.

The American National Red Cross continued its cooperation with FCDA in providing civil defense training programs for women. New courses on home care of the sick and injured were developed and a manual on emergency feeding, jointly sponsored by FCDA and Red Cross, was prepared for publication in 1957. FCDA distributed 10,000 booklets on disaster, which were supplied by the American National Red Cross, and featured a speech by Mr. Ellsworth Bunker, president of the American National Red Cross, in a special issue of the FCDA Women's Newsletter.

The American Legion Auxiliary held its annual training course on home protection at FCDA Staff College, Olney, Md., in January.

The women's auxiliary to the American Medical Association held a panel program on civil defense at its convention in Atlantic City.

The Future Homemakers of America held special round table discussions on civil defense at their meeting in Chicago. This meeting resulted in many requests for program material.

The Newsletter increased its circulation from 5,000 to 19,000 during the year, with 500 to 1,000 additional requests coming in each month. Fourteen issues were published during the year. One on skits was especially popular because of the wide use made of it as the basis for club programs. Another one, "Grandma's Pantry Goes on Wheels," was widely used at State and county fairs, food fairs, and other booths and displays.

The National Women's Advisory Committee meeting was held in Washington, D. C., November 4 and 5, 1955, with 131 in attendance. Recommendations from this committee were used as the basis and guideline for the year's work. Members of the committee were briefed by the Air Force at a special meeting in the Pentagon.

The first youth conference for civil defense was held in January 1956 in Battle Creek, Mich. Both adult and teenage representatives of youth groups attended. A recommendation was made that an official youth conference should be held with a representative from each national organization.

Two official representatives of FCDA, several civil defense volunteers, and members of the American National Red Cross staff were

sent to England for a special 6-week welfare training program given by the Women's Voluntary Services of Great Britain.

Uniform designs for women volunteers were established. Plans for promotion and publicity were scheduled for fiscal year 1957 to be a part of Civil Defense Week.

The first use of December 7th as a promotional date for civil defense was made with an interview broadcast on a national TV network.

Regional conferences attended by representatives of all the States were held in 5 of the 7 regions. Similar meetings were held in many of the States and cities.

GROUND OBSERVER CORPS

The Ground Observer Corps program is administered by the U. S. Air Force. National and local CD officials assist in recruiting. Considerable progress has been made in this program of organizing observation posts and recruiting volunteers to scan the skies for enemy planes as a supplement to radar and other means of guarding against surprise attacks of enemy planes. As of June 30, 1956, the Air Force estimated that to man this program fully the Nation would require 23,418 posts and 1,400,000 volunteers.

The program has grown since December 1952, as indicated by the following charts, from fewer than 10,000 observation posts and approximately 250,000 volunteers to its status on June 30, 1956, with 17,690 observation posts and 474,425 volunteers. Of the 17,690 observation posts, 13,455 are at required locations in order to provide air surveillance; 11,801 are classified as "operationally capable" posts maintaining operational proficiency with a sufficient number of trained personnel to maintain continuous operation for any 72-hour period during actual or simulated alerts and available for reporting 12 months out of the year. A total of 889 posts is classified as "operationally ready" in that they operate around the clock or average at least 160 hours in operation per week specifically observing aircraft. Of these 474,425 volunteers the Air Force reports as of June 30, 1956, show 351,089 were active and 123,336 inactive.

As of June 30 the observation posts report their observations of aircraft to 72 filter centers scattered through the country. These centers with the area reporting to each are indicated on figure 9. There was one change by June 30 which the map does not show, namely, the areas served by Casper and Rapid City were consolidated, with Casper serving both. Other consolidations were scheduled to take place during July and August as follows:

Saginaw combined with Grand Rapids.

Louisville combined with Lexington.

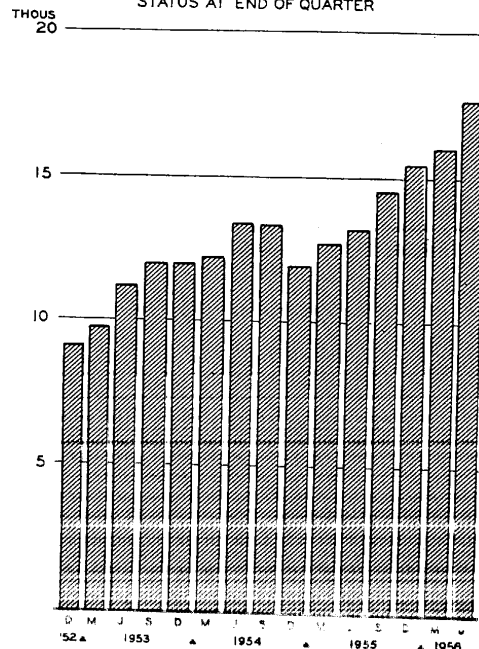
Roanoke combined with Richmond.

Seattle combined with Portland.

White Plains combined with Trenton.

In addition to filter centers and boundaries of their areas, the map shows Air Defense Identification Zones (ADIZ's) set up to maintain air surveillance in these areas and to assist in the peacetime control of air traffic. Only aircraft flying at a true air speed of 110 knots or less and at an altitude of 1,500 feet or less are authorized to fly within an ADIZ without a flight plan previously filed with the Civil Aeronautics Administration. After the filing of a flight plan a pilot in command of an aircraft must adhere to the plan within certain toler-

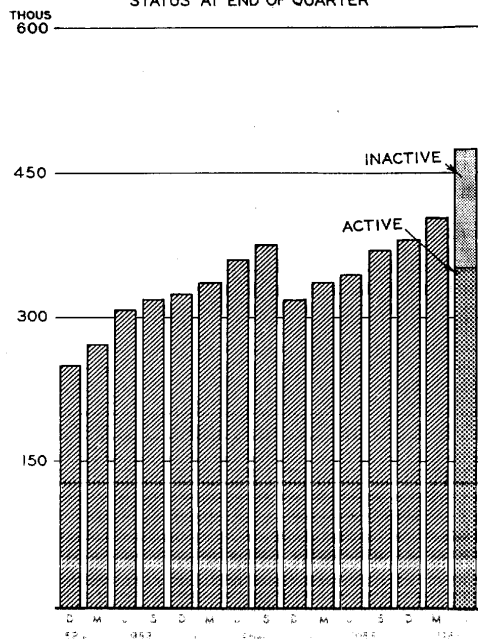
FIGURE 7.—OBSERVATION POSTS ORGANIZED
STATUS AT END OF QUARTER



ances. Otherwise he will be designated as an unknown and jet fighter-interceptor aircraft will be sent aloft to make positive identification.

The following table presents statistics on Ground Observer Corps by States. Six States and the District of Columbia had organized observation posts equal to 90 percent or more of those required at specific locations. Ten States had from 75 to 89 percent, 18 States had 50 to 74 percent, 9 States had 25 to 49 percent, and 5 States had less than 25 percent of the needed posts at required locations. Requirements for volunteers, by States, were not available. The States with the largest numbers of active volunteers were Texas, California, Minnesota, Pennsylvania, New Mexico, Iowa, and Michigan, each of which had over 15,000 active volunteers.

FIGURE 8—VOLUNTEERS ENROLLED
STATUS AT END OF QUARTER



OBSERVATION POSTS—BY STATE

FOIA region and State	Number required	Organized at required locations		Total number organized	Operationally ready (24 hours)	Active volunteers
		Number	Percent of required			
Total.....	23,418	13,455	57	17,416	889	1,365,797
Region 1.....	1,574	1,347	86	1,452	116	36,689
Connecticut.....	89	85	96	87	3	5,021
Maine.....	310	283	91	285	17	6,446
Massachusetts.....	140	135	96	137	3	3,365
New Hampshire.....	127	108	85	123	6	2,054
New Jersey.....	153	102	67	114	28	3,195
New York.....	617	502	81	557	48	12,253
Rhode Island.....	23	17	74	26	1	539
Vermont.....	115	115	100	123	10	3,916
Region 2.....	2,190	1,723	79	1,879	122	45,670
Delaware.....	23	16	70	23	1	1,000
District of Columbia.....	1	1	100	1	1	265
Kentucky.....	392	308	79	312	2	7,346
Maryland.....	107	89	83	122	42	2,565
Ohio.....	491	369	75	381	19	4,450
Pennsylvania.....	593	519	88	642	20	18,336
Virginia.....	368	264	72	335	33	7,085
West Virginia.....	215	157	73	163	6	4,623
Region 3.....	2,851	1,009	35	2,132	101	43,337
Alabama.....	388	105	27	108	4	2,416
Florida.....	470	306	65	415	25	8,900
Georgia.....	582	434	75	525	18	10,024
Mississippi.....	308	85	28	85	2	2,147
North Carolina.....	342	247	72	386	15	4,811
South Carolina.....	266	182	68	337	11	6,702
Tennessee.....	405	248	61	276	26	7,737
Region 4.....	3,218	2,139	66	2,431	144	55,655
Illinois.....	700	478	68	570	19	13,738
Indiana.....	453	408	90	409	18	8,758
Michigan.....	718	628	87	647	62	15,230
Missouri.....	673	133	20	146	3	4,089
Wisconsin.....	674	492	73	659	42	13,840
Region 5.....	3,650	1,450	40	1,776	77	54,007
Arkansas.....	645	151	23	173	13	2,923
Louisiana.....	445	142	32	142	12	3,077
New Mexico.....	393	273	69	449	12	18,148
Oklahoma.....	429	134	31	134	3	4,633
Texas.....	1,738	750	43	878	49	22,226
Region 6.....	4,362	2,680	61	4,260	108	73,680
Colorado.....	453	481	106	492	6	6,515
Iowa.....	622	249	40	554	19	15,726
Kansas.....	634	178	28	241	7	4,203
Minnesota.....	833	492	59	1,100	31	18,809
Nebraska.....	598	352	59	644	9	9,700
North Dakota.....	404	355	88	538	32	11,803
South Dakota.....	398	310	78	428	4	4,160
Wyoming.....	410	263	64	263	2	2,764
Region 7.....	5,573	2,507	45	3,486	221	59,759
Arizona.....	507	246	47	280	33	1,900
California.....	1,249	628	50	963	51	20,368
Idaho.....	596	218	37	414	23	7,306
Montana.....	748	464	62	575	61	10,166
Nevada.....	770	135	18	162	4	1,417
Oregon.....	800	315	39	439	18	7,628
Utah.....	367	204	56	210	2	3,772
Washington.....	555	533	96	518	29	7,947

¹ Data for some States are for a month earlier than June. As of June 30, 1956, the total number of observation posts organized was 17,690 and the total number of active volunteers was 351,089.

TRAINING SCHOOLS

FCDA operates a Staff College in Battle Creek, Mich., and a Rescue School at Olney, Md. In these centers civil defense training is carried on under the Act of Congress creating the agency which authorizes it to "conduct or arrange, by contract or otherwise, for training programs for the instruction of civil defense officials and other persons in the organization, operation, and techniques of civil defense; conduct or operate schools or classes * * *, and provide instructors and training aids as deemed necessary."

The Staff College in Battle Creek has specialized in training civil defense administrative officials in its 1-week administration course. Its other basic courses of at least one week are (a) an operations course covering problems a local civil defense organization would face in an enemy attack, and (b) an evacuation course dealing with the techniques and problems of evacuating a target area. In addition it conducts numerous special courses and conferences for the orientation of Government employees and for instruction of specialized and technical groups such as communications specialists, police officers, fire fighters, engineers, public health officials, the clergy, industry representatives, and others.

The Rescue School at Olney, Md., normally conducts three basic courses: (1) a 2-week basic course for instructors who, presumably, will promote and carry on rescue training work in the States and cities, (2) a 1-week light rescue course, and (3) a 1-week advanced rescue course.

As of June 30, 1956, some 13,625 people had been trained in FCDA schools. (There is undoubtedly some duplication in this figure where the same person completed two or more courses.) A total of 6,406 had completed one of the basic courses and 7,219 attended the special courses and conferences, most of which lasted 2 or 3 days. In fiscal year 1956 a total of 1,204 people completed one of the basic courses and 1,044 received instruction in the special courses and conferences. The following table shows detailed figures and the chart shows the trend of training in the various basic courses.

Basic course ¹	Number of persons trained		
	Prior to fiscal year 1955	Fiscal year 1956	Total
Administration			
Operations	3, 964	311	4, 275
Rescue instructor	207	176	383
Light rescue	965	173	1, 138
Advanced rescue		255	255
Examination	66	22	88
Subtotal		267	267
Special courses and conferences	5, 202	1, 204	6, 406
Total	6, 175	1, 044	7, 219
CIA-RDP80B01676R001000030001-9	11, 377	2, 248	13, 625

¹ All basic courses are of 1 week duration, except rescue instructor which is 2 weeks

EXPANDED GOC PROGRAM

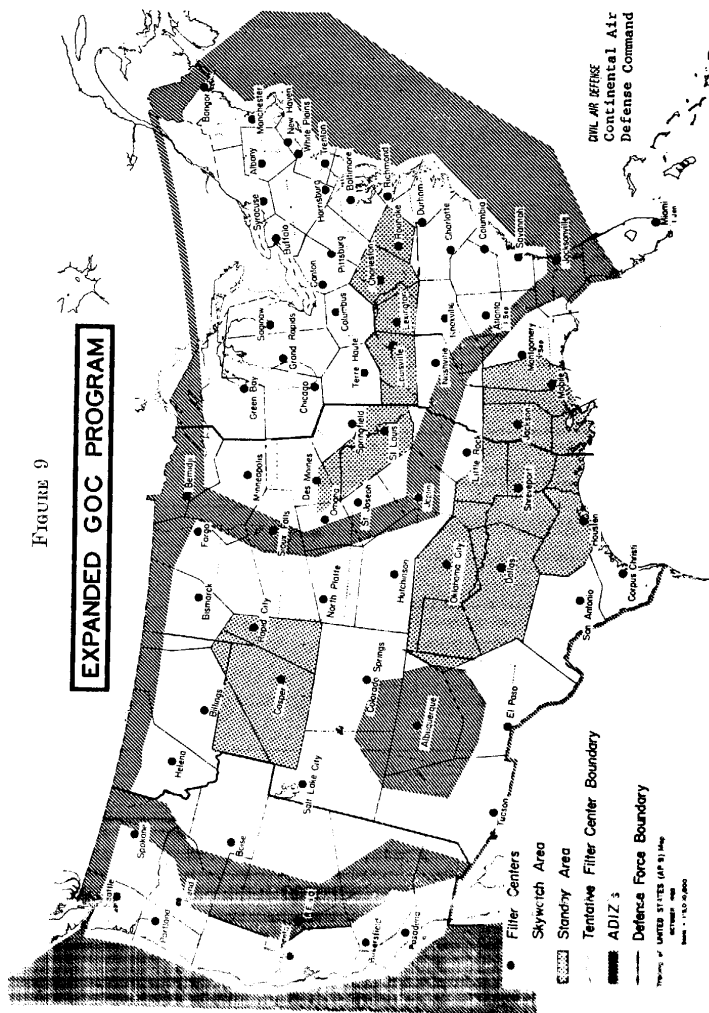
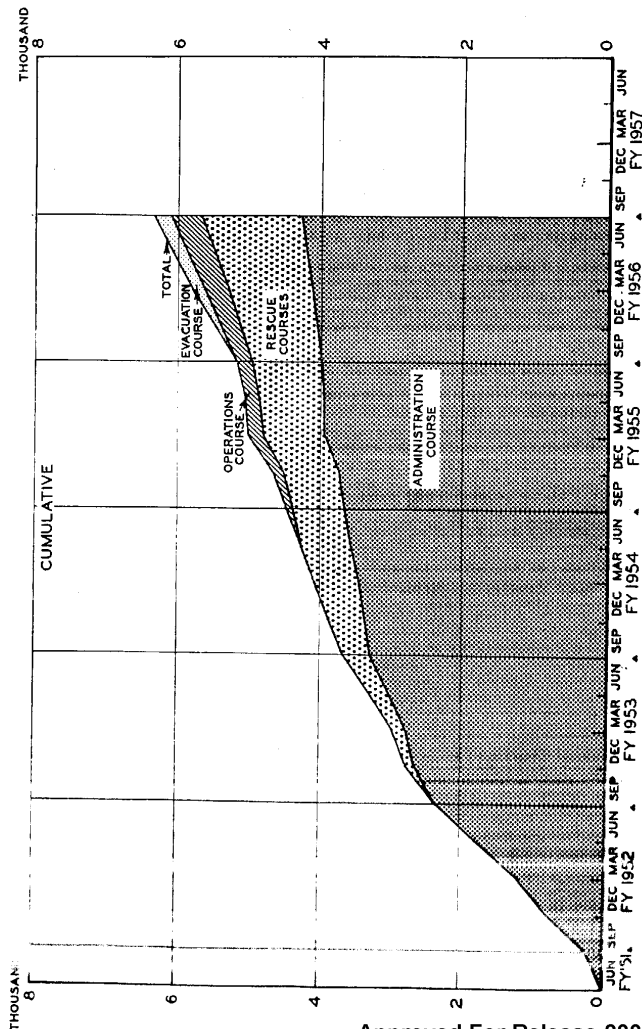


FIGURE 10

PERSONS COMPLETING BASIC CD COURSES

Fiscal Years 1951-56



Persons Completing Basic CD Courses by Region and State, 1951-56

Students in basic civil defense courses have come from every State in the Union. Most of the Territories and possessions have sent people for training also. A total of 454 persons from California has received training. Five other States have benefited by having 200 or more persons trained, namely, Maryland (310), Ohio and Okla-

Region and State	Number of persons	Region and State	Number of persons
Total	6,406	Region 6	291
Region 1	633	Colorado	32
Connecticut	131	Iowa	2
Maine	29	Kansas	115
Massachusetts	132	Minnesota	71
New Hampshire	24	Nebraska	45
New Jersey	129	North Dakota	6
New York	139	South Dakota	9
Rhode Island	42	Wyoming	11
Vermont	7	Region 7	620
Region 2	1,246	Arizona	55
Delaware	87	California	454
Dist. of Columbia	89	Idaho	11
Kentucky	42	Montana	4
Maryland	310	Nevada	3
Ohio	281	Oregon	35
Pennsylvania	138	Utah	12
Virginia	248	Washington	46
West Virginia	51	Territories and possessions	70
Region 3	465	Alaska	15
Alabama	48	American Samoa	-
Florida	181	Canal Zone	6
Georgia	64	Guam	2
Mississippi	17	Hawaii	31
North Carolina	39	Puerto Rico	11
South Carolina	14	Virgin Islands	5
Tennessee	102	Other	1,979
Region 4	531	FCDA	663
Illinois	80	Department of Defense	854
Indiana	121	Other Federal Agencies	302
Michigan	211	Foreign	160
Missouri	43		
Wisconsin	76		
Region 5	571		
Arkansas	7		
Louisiana	190		
New Mexico	12		
Oklahoma	81		

homa (281 each), Virginia (248), and Michigan (211). Each of the other States had a smaller number ranging down to less than 10 people for 7 States and some of the Territories and possessions. Many of the people trained have been sent by Federal Agencies in which they are employed and 160 people have come from foreign countries. The figures in table on page 53 include some duplication where the same people completed more than one basic course.

FCDA Training School Extension Program

In addition to the training activities at FCDA's Staff College in Battle Creek, Mich., and its Rescue School at Olney, Md., a program of training is going forward in the States to assist them in developing their own training programs.

Under one phase of this plan an agreement is made with the State civil defense office which calls for the presentation of an initial Civil Defense Administration Course in the State by a traveling team of FCDA instructors. Some institution of higher learning within the State serves as a cooperating agency, and its facilities are utilized. Among those taking this course are university faculty members, as well as key State and local civil defense personnel who will serve as instructors in subsequent State courses. The State agrees to present the same type of course at least twice a year for 3 years under terms of a contract. Some financial assistance is furnished the State by FCDA for the initial course.

ADMINISTRATION COURSES GIVEN BY FCDA TRAVELING TEAMS

State	Date of FCDA course	People trained by FCDA staff
Ohio.....	Aug. 9-14, 1954.....	54
Connecticut.....	Oct. 4-8, 1954.....	50
Florida.....	Nov. 15-19, 1954.....	73
Georgia.....	May 23-27, 1955.....	30
Wisconsin.....	June 19-23, 1955.....	28
Tennessee.....	Sept. 5-9, 1955.....	58
Maine.....	Sept. 19-23, 1955.....	49
Maryland.....	Oct. 24-28, 1955.....	46
Louisiana.....	Mar. 5-9, 1956.....	58
Kansas.....	Apr. 2-6, 1956.....	31
Total.....	10 courses	477

The first of these State courses was given by an FCDA traveling team in Ohio in August 1954. Through June 30, 1956, a total of 10 Civil Defense Administration Courses had been given in as many

States with a total of 477 persons having been trained. Eight of the States had repeated the course one or more times to an additional 591 trainees.

ADDITIONAL ADMINISTRATION COURSES GIVEN BY STATES

State	Number of courses	People trained
Ohio.....	4	130
Connecticut.....	3	119
Florida.....	3	133
Georgia.....	1	60
Maine.....	1	53
Maryland.....	1	35
Tennessee.....	1	31
Wisconsin.....	1	30
Total.....	15 courses	591

In a second phase of this program FCDA traveling teams have gone into the field and presented special courses to specialized groups. These have been made in response to requests from the States and in accordance with arrangements worked out by the States and FCDA regional offices. Four such courses were given during the first six months of 1956 to 202 persons.

SPECIAL COURSES GIVEN BY FCDA TRAVELING TEAMS

Location	Designation	Date	People trained
Dallas, Tex.....	Federal employees.....	Feb. 15-17, 1956.....	62
Dallas, Tex.....	Religious affairs.....	Feb. 20-21, 1956.....	30
Monroe, La.....	Nurses-dentists.....	Mar. 12-14, 1956.....	60
Kansas City, Mo.....	Federal employees.....	Apr. 9-11, 1956.....	50
Total.....	4 courses		202

Police Institutes

FCDA has provided instruction in civil defense police functions and problems in civil defense to groups in 14 cities. These institutes are conducted by experts in the field at FCDA expense in cooperation with State civil defense and police officials and under guidance of FCDA staff members. Some 1,824 people had participated in these institutes as of June 30, 1956. These were chiefly police officers, sheriffs, auxiliary police, regional civil defense officials, and military personnel.

INSTITUTES HELD

Fiscal Year 1952-56

Location	Date	Attend- ance	Location	Date	Attend- ance
Portland, Oreg.....	May 10-20, 1952...	174	College Park, Md.....	Nov. 9, 1954.....	150
Louisville, Ky.....	Apr. 8-9, 1953.....	130	Camp Perry, Ohio.....	May 15-16, 1955...	73
Providence, R. I.....	Oct. 20-21, 1953...	88	Indianapolis, Ind.....	Apr. 19-20, 1956...	45
Hartford, Conn.....	Feb. 9-10, 1954.....	589	Springfield, Ill.....	May 14-15, 1956...	83
Atlanta, Ga.....	Mar. 30-31, 1954...	108	Olney, Md.....	June 19-20, 1956...	55
Montgomery, Ala.....	Apr. 7-8, 1954.....	124	Total.....		1,824
Chapel Hill, N. C.....	June 23-24, 1954...	102			
Dover, Del.....	Nov. 8-12, 1954...	100			

Emergency Traffic Control

Efficient use of highways and control of traffic are among the problems that would be faced in the event of enemy attack and attempted prior evacuation. As one step toward preparation in this field FCDA, in conjunction with the staff of Northwestern University Traffic Institute, developed a course of instruction on emergency supervision and regulation of street and highway traffic for civil defense purposes. This course has been given at FCDA expense in 15 cities for the benefit of State and local traffic control officers and other civil defense officials. Some 489 persons have received this training, 188 representing the States, 230 representing civil subdivisions, 21 representing the Department of Defense, and 50 other civil defense officials—mostly employees of FCDA national and regional offices. Of the 418 representing States and civil subdivisions, 248 were police traffic supervisors, 90 were traffic engineers, 37 were civil defense highway transportation officials, and 43 were other civil defense officials.

COURSES PRESENTED

Location	Date	Attend- ance	Location	Date	Attend- ance
Evanston, Ill.....	Feb. 18-29, 1952...	21	Lowry AF Base, Sept. 14-25, 1953...		30
Olney, Md.....	May 26-June 6, 1952	23	Denver, Colo.....	Dec. 7-11, 1953...	27
Boston, Mass.....	July 14-25, 1952...	27	Lansing, Mich.....	June 9-10, 1954...	26
Evanston, Ill.....	Sept. 8-19, 1952...	38	Monroe, La.....	Nov. 15-19, 1954...	12
Seattle, Wash.....	Sept. 28-Oct. 10, 1952	28	Columbus, Ga.....	Jan. 10-14, 1955...	18
St. Mary's College, Calif.....	Nov. 10-21, 1952...	41	Louisville, Ky.....	Mar. 21-25, 1955...	40
Naval Air Station, Dallas, Tex.....	Feb. 16-26, 1953...	71	Battle Creek, Mich.....	Dec. 5-9, 1955...	40
Georgia Inst. of Tech.....	Apr. 27-May 8, 1953	42	Detroit, Mich.....		
Total.....			Total.....		489

ENROLLMENT REPRESENTATION

	June 30, 1955	July 1, 1955 to June 30, 1956	Total June 30, 1956
Total.....	449	40	489
States.....	182	6	188
Subdivisions.....	203	27	230
Department of Defense.....	21	0	21
Other.....	43	7	50

MOTION PICTURES

FCDA has recognized the importance of motion pictures as a training aid for use both in formal instruction courses and for general public education. Almost from the beginning of the agency, work has gone forward in the production of civil defense films. Some of them have been produced at FCDA cost. Others have been sponsored by commercial enterprises and produced at no cost to FCDA. A variety of fields and situations have been covered—survival, shelter, evacuation, and expected damage in the event of attack. Most of the films have been cleared for television use and are available also for use in schools, churches, and civic organizations.

Some of the earlier films released have been withdrawn because changing concepts and new weapons have made them obsolete.

The following lists show the films which are now completed and available and those in process for release in the future.

FILMS COMPLETED AND AVAILABLE

Name	Black and white or color	Running time (minutes)	Date released
A New Look at the H Bomb.....	Both	10	Feb. 1955.
Atomic Attack.....	B & W	50	1954.
Big Men in Small Boats.....	Both	13½	Jan. 1956.
Bombproof.....	Both	13½	Jan. 1956.
CONELRAD.....	B & W	9	May 1955.
Escape Route.....	C	13½	Aug. 1955.
First Aid (6 TV Film Spots).....	(?)		Feb. 1954.
Frontlines of Freedom.....	B & W	13	Jan. 1955.
House in the Middle, The.....	Both	6½	Oct. 1953.
Let's Face It.....	Both	12	1954.
New Family in Town.....	C	13½	Aug. 1955.
Operation Cue.....	B & W	13½	(?)
Operation Doorstep.....	Both	13½	May 1956.
Operation Ivy.....	B & W	16	June 1953.
Operation Seat.....	Both	28	Mar. 1954.
Operation Welcome.....	B & W	11½	1954.
Rehearsal for Disaster.....	C	10	Aug. 1955.
Rescue Street.....	B & W	13½	Jan. 1954.
Target You.....	Both	14	1954.
Time of Disaster.....	B & W	10	July 1955.
To Live Tomorrow.....	B & W	10	Dec. 1954.
Trapped.....	B & W	13½	July 1955.
Warning Red.....	B & W	20	Feb. 1954.
	B & W	13½	May 1956.

¹ Sponsored and/or financed by a commercial organization with cooperation of FCDA.

² For release in August 1956.

NEW FILMS IN PROCESS

Atomic Torch
(Mass Fire Fighting)
Big Voice, The
(Gary, Ind., Exercise 1956 Alert)
Church in Civil Defense
Civil Defense for Industry
Civil Defense Week Documentary
Disaster Documentary
Facts About Fallout
Farm Civil Defense
Helicopters in Civil Defense
High Yield Weapons Effects
Nerve Gas Casualties

Operation Alert 1956
Operation Kids
(Evacuation of Schools)
Operation Scramble
(Hospital Evacuation, St. Louis)
Stroudsburg Story
(Delivery of drinking water during Natural Disaster)
Tomorrow Today
(Series of 13 TV ¼-hr. programs—embracing various civil defense subjects)

FILMSTRIPS

Filmstrips are one of the most effective training aids in civil defense. Filmstrips, dealing with a wide variety of civil defense subjects, have been produced by FCDA and in most cases have been interwoven with lesson units and training courses available to civil defense and other organizations. States and local subdivisions can purchase these materials under the Federal-State Matching Funds Program by submitting applications to the FCDA regional offices.

Following are the titles of filmstrips now available and those currently in process.

FILMSTRIPS COMPLETE AND AVAILABLE

Title	Date released	Title	Date released
<i>Public Information</i>		<i>Training</i>	
Civil Defense Against Biological Warfare	June 1956	What You Should Know About Radioactive Fallout	Jan. 1956
Civil Defense of Animals Against Biological Warfare	June 1956	Skills Training Series:	
Civil Defense of Man Against Biological Warfare	June 1956	Emergency First Aid	Sept. 1953
Civil Defense of Plants and Crops Against Biological Warfare	June 1956	Fire Fighting—Part I	Sept. 1953
Improvised Hospitals (2)	May 1954	Fire Fighting—Part II	Sept. 1953
Operation Cue	Oct. 1955	Handling and Care of Ladders	Sept. 1953
Role of the Warden in Fire, The	May 1953	Lowering and Raising Casualties on a Stretcher	Sept. 1953
Role of the Warden in Rescue, The	Dec. 1952	Pick-ups, Carries and "rags"	Sept. 1953
Warden's Responsibility for Emergency Sanitation, The	Dec. 1953	Ropes and Knot Tying—Part I	Sept. 1953
		Ropes and Knot Tying—Part II	Sept. 1953
		Using a Ladder as a Stretcher	Sept. 1953
		Using Improvised and Regular Stretchers	Sept. 1953
		Using Ladders in Rescue	Sept. 1953

FILMSTRIPS IN PROCESS

Public Information

Civil Defense Against Biological Warfare¹
Conducting a Neighborhood Civil Defense Meeting
Evacuation of Neighborhood Handicapped Persons
Facilities and the Block Warden Organization
Mobilizing the Neighborhood for Evacuation
Preparing your Neighborhood for Evacuation
Role of the Warden in the H-Bomb Era,¹ The
Shelter from Fallout
Your Family Evacuation Plan

Training

Warden:
Block Census, The
Map Making for Wardens
Role of the Warden in Receiving and Billeting Evacuees, The

Industry:

Establishing Protective Shelters in Industry
Evacuation of Industrial Plants
Moving Industrial Workers into Shelters
Organizing for Civil Defense Protection in Industry
Eliminating Hazards to Civil Defense in Industry
Planning Civil Defense Protection in Industry

Rescue:

Damage Survey for Rescue Workers
Reconnaissance and Rescue by Stages
Rescue from Basements
Rescue Squad Operations
Rescue Tools and Techniques

Welfare:

Registration and Information
Welfare Program in Civil Defense, The
Emergency Mass Feeding

RADIO AND TELEVISION

Radio and television are most effective means of getting a message to a large number of people in the shortest possible time. FCDA uses them in three principal ways: (1) by providing specially prepared spots, films, and programs to stations throughout the country to keep reminders of civil defense constantly before the public, (2) by integrating civil defense information into regular network broadcasts either by personal appearances of civil defense people or the material into the usual format of programming, and (3) by preparing special civil defense programs for actual use on radio networks, such as the current programs on the Mutual Broadcasting System entitled "By the People," and "Dateline Defense." Radio materials are usually recorded on transcription platters and distributed to every station in the United States and the Territories. TV materials are put on film and likewise sent to all stations. A list of available materials appears below.

¹ Filmograph.

MATERIALS AVAILABLE

RADIO TRANSCRIPTIONS

Title	Running time	Explanation
CONELRAD Spots.....	21 to 53 seconds	Well-known commentators.
CONELRAD Spots.....	19 to 50 seconds	Announcers.
CONELRAD Spots (Series II).....	1 minute	Novelty—humorous.
Dramatized Spots.....	1 minute; 20 seconds; 10 seconds.	Civil defense basic spots in dramatic form.
Firefighting for Household.....	1 minute	Spot announcement.
Firefighting for Household.....	18 seconds	Do.
Firefighting for Household.....	14½ minutes	Radio program.
"No Second Chance".....	14½ minutes	Dramatic CONELRAD program.
Personality Spots.....	Various	Civil defense announcements by leading stars of radio and television.
Religious Spots.....	30 seconds	Civil defense announcements by top religious leaders.
Stars for Defense.....	14 minutes each	Musical programs with top singing stars.
The Farmer and Civil Defense.....	29½ minutes	Roundtable discussion between Governor Peterson, Undersecretary of Agriculture True D. Morse, and leaders of national farm organizations.
This is Civil Defense.....	15 minutes each	Series of 13 dramatic programs.

TELEVISION MATERIAL

CONELRAD.....	20 seconds	Film spot.
Star TV Film Spots.....	1 to 3 minutes	Famous stars give civil defense messages.
TV Station I. D. Slide.....		Station break call letters slide.

¹ For release in September 1956.

PUBLICATIONS

FCDA has published and distributed a large number of publications dealing with various aspects of civil defense in accordance with provisions of the basic law creating the Agency which authorized the Administrator to "publicly disseminate appropriate civil defense information by all appropriate means."

As of June 30, 1956, more than 145,000,000 copies of publications had been distributed and sold. Many of these were administrative and technical manuals, bulletins, guides, and handbooks for use of civil defense officials and for training and educational purposes. Many others were issued for the information and guidance of the general public. These included numerous small booklets, leaflets, and cards on specific aspects of civil defense. The following table shows the number of copies distributed and issued in fiscal year 1956.

Material Distributed and Issued in Fiscal Year 1956

Administrative guides.....	
Flyers.....	95,968
Handbooks.....	33,970
Instructor's guides.....	693,149
Manuals.....	135,205
Posters.....	8,420
Program guides.....	526,662
Public booklets.....	50,310
Technical bulletins.....	5,192,314
Technical manuals.....	901,422
Technical reports.....	294,767
Training and education bulletins.....	82,611
Training bulletins.....	5,227
Volunteer manpower.....	29,012
Miscellaneous publications.....	11,610
Total.....	40,655,972
	¹ 48,716,619

¹ Does not include sales by Superintendent of Documents, Government Printing Office. In addition, at the year's end 1 instructor's guide, 4 technical bulletins, 1 technical report, and several miscellaneous publications were at the printer or otherwise in printing process, and will be distributed early in fiscal year 1957.

Many publications issued in early stages of the program became obsolete in the light of more recent developments and weapons and consequently have either been revised or replaced by new publications with later technical information. The following list shows the publications currently available. All of these are available from FCDA in Battle Creek, Mich., and most of them can be obtained also from the Superintendent of Documents in Washington, D. C.

PUBLICATIONS

Available as of June 30, 1956

Identification	Title	Publication date
<i>Administrative Guides</i>		
AG-6-1	Supply Service, The.....	June 1952
AG-7-1	Warden Service, The.....	Aug. 1951
AG-8-1	Principles of CD Operations.....	July 1951
AG-9-1	Fire Services.....	Oct. 1951
AG-10-1	Police Services.....	May 1951
AG-11-1	Health Services and Special Weapons Defense.....	June 1952 ¹
AG-12-1	Emergency Welfare Services.....	Dec. 1950
AG-13-1	Engineering Services.....	June 1952 ¹
AG-14-1	Rescue Service, The.....	Feb. 1952
AG-16-1	CD in Industry and Institutions.....	July 1952 ¹
AG-25-1	Clergy in Civil Defense, The.....	Feb. 1952
		July 1952 ¹
		May 1951
		Aug. 1951
		Oct. 1951

PUBLICATIONS—Continued

Identification	Title	Publication date
<i>Handbooks</i>		
H-3-1	Annotated CD Bibliography for Teachers.....	Dec. 1951 Sept. 1955 ¹ Feb. 1956 ¹ Apr. 1956 ¹
H-11-1	Before Disaster Strikes—What to Do Now About Emergency Sanitation at Home.....	Aug. 1953 Mar. 1954 ¹ Oct. 1955 ¹ Mar. 1956 ¹
H-11-2	Before Disaster Strikes—What the Farmer Should Know About Biological Warfare.....	Aug. 1954 Apr. 1955 ¹ Nov. 1955 ¹ Feb. 1956 ¹ Feb. 1956 June 1956 ¹
H-25-2	Civil Defense Glossary.....	June 1956 ¹
<i>Instructor's Guides</i>		
IG-3-1	Skills Training Films.....	Aug. 1954
IG-3-2	Basic Course for Civil Defense.....	Feb. 1955
IG-3-3	Civil Defense Instructor's Course.....	Feb. 1956
IG-11-1	Venipuncture and Intravenous Procedures.....	Aug. 1954
IG-14-1	Basic Rescue Course.....	Jan. 1956
IG-19-1	Introduction to Radioactive Fallout.....	Sept. 1955
<i>Manuals</i>		
M6-1	Standard Item Specifications.....	Feb. 1952
M25-1	Federal Contributions.....	Oct. 1954 1955 ¹
M27-1	Survival Plan Manual (Advance).....	Sept. 1955
M27-2	Survival Plan Workbook (Advance).....	Dec. 1955
<i>Posters</i>		
	"Alert America".....	Apr. 1952
	Civil Defense—Part of Our Tradition.....	May 1954
	Disaster Strikes Suddenly (Car Cards).....	Sept. 1953
	Fiddling's Fun.....	May 1954
	Go Join Civil Defense.....	June 1954
	In Case of Air Raid (Billboard).....	July 1955
	In Case of Air Raid (Car Cards).....	Mar. 1955
	Natural Disaster.....	1956
	Mr. Civil Defense.....	1956
	Official CD Identification.....	July 1954
	Partners in Defense.....	1956
	Radioactive Fallout Poster.....	Sept. 1955
	Recruiting.....	Jan. 1953
	Rescue Training Poster.....	July 1955
	They Serve to Protect.....	Aug. 1954
<i>Program Guides</i>		
PG-11-1	Needed—Home Nursing for Civil Defense.....	Feb. 1955

See footnote at end of table.

PUBLICATIONS—Continued

Identification	Title	Publication date
<i>Public Booklets</i>		
PA-2	What You Should Know About Biological Warfare.....	1951
PA-3	This is Civil Defense.....	May 1951 June 1956 ¹ Oct. 1951
PA-4	Fire Fighting for Householders.....	Mar. 1956 ¹ July 1951
PA-5	Emergency Action to Save Lives.....	Apr. 1954 ¹ June 1955
PA-7	What You Should Know About Radioactive Fall- out.....	June 1956 ¹ 1956
PA-F-1	Mr. CD Reporting for Duty.....	1956
PA-F-2	Shake Off That Spring Fever.....	1956
PA-F-3	You and the Welfare Program.....	1956
<i>Technical Bulletins</i>		
TB-4-1	Advantages of FM over AM for Civil Defense Com- munications in the Frequency Bands 50 Mega- cycles per Second and Up.....	Oct. 1953 Dec. 1953 ¹
TB-4-2	Radio Frequency Allocation Plans for Disaster Com- munications Service and Radio Amateur Civil Emergency Service.....	Oct. 1953
TB-4-3	National Communications Priorities.....	Sept. 1955
TB-5-1	Interim Design Standards for Protective Construc- tion in Industrial Structures.....	Apr. 1954 Sept. 1955
TB-5-2	Shelter From Radioactive Fallout.....	Oct. 1955 ¹ Jan. 1956 ¹ Nov. 1954
TB-7-1	The Role of the Warden in Panic Prevention.....	Sept. 1955 ¹ Feb. 1955
TB-8-1	Blast Damage from Nuclear Weapons of Larger Sizes.....	Mar. 1952
TB-11-1	Emergency Exposures to Nuclear Radiation.....	Apr. 1952
TB-11-2	Personal Dosimeters for Radiological Defense.....	Nov. 1952
TB-11-3	The Most Promising Personal Dosimeters for Civil Defense Use.....	Nov. 1952
TB-11-4	Development Status of Personal Dosimeters.....	Dec. 1952
TB-11-5	Emergency Blood Transfusion.....	Sept. 1955 ¹
TB-11-6	Emergency Blood Grouping Laboratory Tech- niques.....	Dec. 1952
TB-11-8	Permissible Emergency Levels of Radioactivity in Water and Food.....	May 1953
TB-11-9	Emergency Measurement of Radioactivity in Food and Water.....	Apr. 1956 ¹ June 1953
TB-11-10	Responsibilities for Production and Distribution of Potable Water During Disaster.....	Aug. 1955 ¹ 1951
TB-11-11	Use of Tourniquet in Controlling Hemorrhage.....	Feb. 1954 ¹ July 1954
TB-11-12	Civil Defense Household First Aid Kit.....	Sept. 1955 ¹ July 1954
TB-11-13	The FCDA Clinical Laboratory Assembly.....	July 1954
TB-11-14	Revised Instructions for Shipping Blood.....	May 1956 ¹ July 1954
TB-11-15	Phosphate Glass Dosimetry.....	Aug. 1954
TB-11-16	Minimum Potable Water Supply Requirements in Civil Defense Emergencies.....	Apr. 1955
TB-11-18	Biological Warfare Against Public Water Supply.....	Sept. 1955
TB-11-19	Protection Against Fallout Radiation.....	Sept. 1955
TB-11-20	Radiological Instruments for Civil Defense.....	Sept. 1955

See footnote at end of table.

PUBLICATIONS—Continued

Identification	Title	Publication date
<i>Technical Bulletins—Continued</i>		
TB-11-21	Fallout and the Winds.....	{Oct. 1955 Feb. 1956 ¹
TB-11-22	Radiation Physics and Bomb Phenomenology.....	{Dec. 1955 June 1956 ¹
TB-11-23	Promotion of an Emergency Hospital Exhibit.....	Apr. 1956
TB-13-1	Engineering Equipment Stockpiled for Emergency Water Supply Use.....	June 1952
TB-13-2	Utilization of FCDA Stockpiled Portable Generator Sets.....	Sept. 1953
TB-13-3	Preliminary Report of Tests of Thermal Type Atomic Bomb Air Zero Locators.....	Oct. 1953
TB-13-4	Report of Tests of Identification Tags Exposed to Blast and Thermal Radiation of an Atomic Bomb.....	Oct. 1953
TB-13-5	Utilization of FCDA Stockpiled Lightweight Steel Pipe and Centrifugal Pumps.....	Dec. 1953
TB-13-5 Supp.	New Check Valve and Priming Instructions for FCDA Centrifugal Pumps.....	Dec. 1954
TB-13-6	Utilization of FCDA Stockpiled Portable Water Purifiers and Storage Tanks.....	Apr. 1954
TB-13-7	Utilization of FCDA Stockpiled Flexible Vinyl Film.....	Apr. 1954
TB-13-8	Utilization of FCDA Stockpiled Mobile Chlorinators.....	Apr. 1954
TB-13-9	Restoration of Gas Facilities in Civil Defense Emergencies.....	May 1954
TB-13-10	Sewage Works Facilities in Civil Defense Emergencies.....	June 1954
TB-13-11	Plastic Patching for Emergency Pipe Repairs.....	Apr. 1955
TB-14-1	Construction and Adaptation of Structures for Rescue Training.....	{Dec. 1952 Nov. 1953 ¹
TB-16-1	Casualty Services in Facilities.....	Aug. 1953
TB-16-2	Protection of Vital Records and Documents.....	May 1955
TB-16-3	Industry Defense—Sources of Reference and Guidance.....	{Dec. 1955 June 1956 ¹
TB-16-4	Industry Defense Checklist.....	Apr. 1956
TB-19-1	The Radioactive Fallout Problem.....	June 1955
TB-19-2	The Problem of Panic.....	June 1955
TB-27-1	Evacuation of Civil Populations in Civil Defense Emergencies.....	{Feb. 1955 Oct. 1955 ¹
TB-27-2	Evacuation Checklist.....	May 1955
TB-27-3	The Role of the Warden in the H-Bomb Era.....	Aug. 1955
<i>Technical Manuals</i>		
TM-4-1	Outdoor Warning Device Systems.....	{Oct. 1951 July 1952 ¹
TM-5-1	Shelter from Atomic Attack in Existing Buildings, Part I—Method for Determining Shelter Needs and Shelter Areas.....	{Feb. 1952 July 1952 ¹
TM-5-2	Shelter from Atomic Attack in Existing Buildings, Part II—Improvement of Shelter Areas.....	May 1952
TM-5-3	Interim Guide for the Design of Buildings Exposed to Atomic Blast.....	June 1952
TM-5-4	Windowless Structures—A Study in Blast-Resistant Design.....	{June 1952 Jan. 1953 ¹
TM-5-5	Home Shelters for Family Protection.....	July 1953
TM-8-1	Civil Defense Urban Analysis.....	July 1953
TM-9-1	Water Supplies for Wartime Fire Fighting.....	July 1951
TM-9-2	Fire Effects of Bombing Attacks.....	{1950 Aug. 1952 ¹ Sept. 1955 ¹

See footnote at end of table.

PUBLICATIONS—Continued

Identification	Title	Publication date
<i>Technical Manuals—Continued</i>		
TM-11-1	Organization and Operation of Civil Defense Casualty Services, Part I—The First-Aid System.....	Jan. 1953
TM-11-3	Organization and Operation of Civil Defense Casualty Services, Part III—Medical Records for Casualties.....	{Mar. 1952 Oct. 1952 ¹ Apr. 1952 Dec. 1952 ¹ Jan. 1953 ¹ Mar. 1952 Sept. 1952 ¹ July 1955 ¹ June 1952 Dec. 1952 ¹ Apr. 1954 ¹ Apr. 1953 Feb. 1953 Apr. 1954 ¹
TM-11-5	Blood and Blood Derivatives Program.....	{Apr. 1952 Dec. 1952 ¹ Jan. 1953 ¹ Mar. 1952 Sept. 1952 ¹ July 1955 ¹ June 1952 Dec. 1952 ¹ Apr. 1954 ¹ Apr. 1953 Feb. 1953 Apr. 1954 ¹
TM-11-6	Radiological Decontamination in Civil Defense.....	{Nov. 1953 Jan. 1955 Aug. 1955 Apr. 1956 May 1954
TM-11-7	The Nurse in Civil Defense.....	Jan. 1953
TM-11-8	Emergency Medical Treatment.....	Sept. 1953
TM-11-9	The Dentist in Civil Defense.....	Apr. 1954
TM-11-10	Civil Defense Against Biological Warfare.....	Sept. 1953
TM-11-11	The Veterinarian in Civil Defense.....	Apr. 1954
TM-11-11	The Veterinarian in Civil Defense (Errata).....	Sept. 1953
TM-11-12	Mortuary Services in Civil Defense.....	{Oct. 1952 ¹ Nov. 1955 Nov. 1955 Jan. 1956 ¹
TM-12-1	Registration and Information Service.....	
TM-13-1	Utilization and Control of Streets and Highways in Civil Defense Emergencies.....	
TM-13-2	Operation and Repair of Water Facilities in Civil Defense Emergencies.....	
TM-13-3	Clearance and Restoration of Streets and Highways in Civil Defense Emergencies.....	
TM-14-1	Rescue Techniques and Operations.....	
TM-16-1	Civil Defense in Schools.....	
TM-27-1	Procedure for Evacuation Traffic Movement Studies.....	
TM-27-2	Planning and Organizing for Civil Defense Traffic Operations.....	
<i>Technical Reports</i>		
TR-4-1	The Effectiveness of Sonic Outdoor Warning Devices.....	July 1954
TR-9-1	Preliminary Report Operation Firestop.....	Jan. 1955
TR-11-1	Effects of Nuclear Explosions Upon Drugs.....	Mar. 1955
TR-27-1	Operation Kids.....	Sept. 1955
TR-27-2	Scientific Study of the Preattack Evacuation of New York City.....	
TR-27-3	Spontaneous Leadership in a Civil Defense Evacuation Exercise.....	Oct. 1955
TR-27-4	Operation Exit.....	Oct. 1955
TR-27-5	Operation Green Light.....	June 1956
<i>Training Bulletins (Officer Series)</i>		
No. 1	Determining Civil Defense Training Needs.....	Jan. 1952
No. 2	Setting Up Your Civil Defense Program.....	Feb. 1952
No. 4	Getting Good Instructors for Civil Defense.....	Apr. 1952
No. 5	Improving Civil Defense Instruction: Planning.....	May 1952
No. 8	Improving Civil Defense Instruction: Use of Audio-Visual Aids.....	
No. 9	Map Making for Civil Defense.....	Aug. 1952
		Oct. 1952

PUBLICATIONS—Continued

Identification	Title	Publication date
<i>Training Bulletins (Officer Series)—Continued</i>		
No. 10	The Block Census.....	Nov. 1952
No. 11	The Role of the Warden in Rescue.....	Dec. 1952
No. 13	Reconnaissance Functions of the Block Warden.....	Jan. 1953
No. 14	Conducting a Neighborhood Civil Defense Meeting.....	Feb. 1953
No. 15	Facilities and Block Warden Organization.....	Mar. 1953
No. 16	Emergency Sanitation for Neighborhoods.....	Apr. 1953
No. 17	The Role of the Warden in Receiving and Billeting Evacuees.....	Apr. 1953
No. 18	The Warden Post Message Center.....	Apr. 1953
No. 22	Rescue Tools and Their Application to Rescue Techniques.....	July 1953
No. 23	Organizing a Neighborhood for Survival.....	Jan. 1954
Unnumbered	Rescue Squad Operations.....	May 1953
<i>Training Bulletins (School Series)</i>		
No. 1	How to Maintain a School Bulletin Board on Civil Defense.....	Jan. 1952
No. 2	What Teachers Should Know About Civil Defense.....	Mar. 1952
No. 5	Motion Pictures for Civil Defense Education.....	July 1952
No. 7	What Teachers Should Know About Atomic Warfare.....	Mar. 1953
<i>Miscellaneous</i>		
	AEC—A Report by the United States Atomic Energy Commission on the Effects of High Yield Nuclear Explosions.....	Feb. 1955
	Alert Signal.....	July 1955
	Annual Report—1951.....	1952
	Annual Report—1952.....	1953
	Annual Report—1954.....	1954
	Annual Report—1955.....	1956
	Annual Statistical Report—Fiscal Year Report 1955.....	1955
	Atomic Blast Creates Fire.....	Sept. 1951
	Civil Defense and National Organizations.....	May 1951
	Civil Defense Household First Aid Kit.....	(June 1951)
	Civil Defense Rescue Training—Brochure.....	(Apr. 1955)
	Cleveland Story, The.....	(Dec. 1955)
	CONELRAD Identification Stamps (150 per book).....	June 1954
	CONELRAD—Pamphlet.....	Jan. 1954
	CONELRAD—Pamphlet.....	(Sept. 1953)
	CONELRAD—Pamphlet.....	(Apr. 1955)
	CONELRAD—Pamphlet.....	(Dec. 1955)
	CONELRAD—Pamphlet.....	(June 1956)
	CONELRAD Sticker (80 per card).....	Apr. 1956
	Control of Communicable Diseases in Man.....	1955
	Corner Room Shelters.....	June 1953
	Damage from Atomic Explosion and Design of Protective Structure.....	Aug. 1951
	Emergency Mass Feeding Instructor Course.....	Aug. 1953
	Employee Handbook.....	June 1952
	Evacuation Advertising Kit.....	May 1956
	Evacuation Signal.....	July 1955
	Facts About Civil Defense (Speakers Kit).....	May 1955
	Facts About Fallout.....	Mar. 1955
	Facts About the H-Bomb.....	Feb. 1955
	Filmstrip.....	1955

PUBLICATIONS—Continued

Identification	Title	Publication date
<i>Miscellaneous—Continued</i>		
	Four Wheels to Survival.....	{Oct. 1955
	Home Protection Exercises—A Family Action Program.....	{Feb. 1956 ¹
	Home Protection Exercises (Exercise No. 1).....	{Aug. 1953
	Interim Statistical Report No. 1.....	{June 1954 ¹
	Lean-To Shelters.....	{June 1955 ¹
	Leadership Guide—National Civil Defense Week.....	{Mar. 1956 ¹
	National Plan (Advance).....	1955
	Natural Disaster Manual.....	Dec. 1955
	Operation Doorstep—2½ Seconds—Brochure.....	June 1953
	Operation Doorstep Booklet.....	May 1956
	Outdoor Shelters.....	May 1956
	Rural Family Defense.....	June 1953
	Seal—CD Week "Alert Today".....	Mar. 1953
	Shelter Designs.....	June 1953
	Signs of Our Times.....	1956
	Six Steps to Survival.....	June 1956
	Special Course for Clergymen, A.....	May 1956
	States, Counties, and Cities in Civil Defense, The.....	June 1953
	Target Areas for Civil Defense.....	June 1953
	Three Minutes of Your Time Can Save a Life.....	1956
	TV—Flip Card—CD Week.....	June 1956
	Underground Personnel Shelters.....	Sept. 1955
	United States Civil Defense.....	1950
	Visitors' Brochure.....	Jan. 1956
	What You Can Do Now.....	{Oct. 1952
		{Feb. 1956 ¹

¹ Revised.

TRAINING EXERCISES

The task of developing civil defense preparedness against the possible use of modern atomic and hydrogen weapons is without precedent in the United States. Consequently basic policies, plans, and procedures had to be evolved and developed at all government levels. Training and practice exercises have been one means used to test and develop proposed plans. Many training exercises have taken place throughout the country as State and local civil defense organizations developed projects in which testing was useful. Such exercises have been especially useful in testing evacuation plans, reception area plans, mass feeding and other mass care programs, warning and communication systems, as well as in training specific groups of civil defense workers in the performance of their emergency duties.

The following table lists State and local training exercises that have been reported to FCDA in fiscal year 1956. The data are arranged by FCDA Region and State. While the list is not necessarily complete, it does indicate the nature of the exercises conducted.

By Region

Location	Operation name and date	Object or description	Area or facilities involved	Approximate number of participants	Time
REGION 1					
Connecticut: Winstec Greenwich Fairford	CPX, May 7, 1956. Control Center Demonstration, May 20, 1956. "Emergency Mass Feeding," May 20, 1956.	Train control center operational staff. Demonstrate operations of a control center to the general public. Demonstrate mobilization ability for mass feeding of 100 or more persons on short notice.	Local control center. Greenwich Auditorium setup as control center. Guilford	18. 800. 125.	3 hours. 2½ hours. 2 hours.
State of Connecticut.	"Communications Drill," Friday, once per month.	Training of radio and other communications personnel in control center operations.	Area and local control centers.	250 per drill.	Do.
Do.	CPX, every 2d Monday each month.	Training staff at all levels in control center operations and problem solution.	60 towns.	300-500 per test.	2 hours monthly.
Newington	Test run.	Trial run to test evacuation route, Newington to Cromwell. Also test of communications.	Newington and Guilford.	15.	3 hours.
Maine Limestone	"Evacuation," June 4, 1956.	Evacuation of dependents from Air Force Base to Caribou, Fort Fairfield, and Limestone.	Loring Air Force Base.	1,200 dependents (250 autos).	
State of Maine.	"Test Alert," June 13, 1956.	To test effectiveness of the Air Raid Warning system of the entire State, operating quality of new sirens, and to provide the public an opportunity to hear the yellow and red alarms.	Statewide.	80,000 civil defense volunteers.	1 day.
Hancock and Waldo Counties.	"Evacuee Reception," June 23, 1956.	To rehearse reception procedures at local and county levels and test evacuation routes.	Cities and towns in Hancock and Waldo Counties.	500 citizens, 180 civil defense volunteers.	
Massachusetts: State of Massachusetts.	"Noah," Aug. 18-31, 1955.	Flood emergency presented opportunity to test existing natural disaster plans and procedures.	Statewide.	10,431 civil defense workers.	170 hours.
Waltham.	"Potluck," Sept. 22, 1955.	State sponsored emergency disaster feeding demonstration at Waltham Field Station, Massachusetts Extension Service.		300.	20 minutes to feed participants.
State of Massachusetts.	"Flood Emergency," Oct. 16-18, 1955.	Flood Alert. Civil defense areas on standby status—tested natural disaster alert procedure.	Area sector staffs.	75 civil defense staff workers.	63 hours.

Truro	"Cape Cod," Oct. 29, 1955.	State sponsored test of evacuation and feeding in cooperation with Provincetown Red Cross Medical Unit. The "evacuees" were supposedly taken off the Cape and fed.	Barnstable County.	150.	
State of Massachusetts.	"Doubleheader," Mar. 19-20, 1956.	Two successive blizzards causing widespread disruption of transportation and supply afforded an opportunity to test new civil defense organization in natural disaster. Headquarters was placed on an alert—shelters, cots, blankets, and services (including auxiliary police and firemen) were provided.	Statewide.	400 civil defense staff, 1,500 volunteers.	23 hours.
Do.	"Communications Test," May 7, 1956.	To test civil defense communications at State, area, and local levels.	do.	300 civil defense staff.	2 hours.
Do.	"Lexington," June 4, 1956.	Control center exercise; to rehearse operational procedures and to train in communications techniques.	do.	2,000 civil defense staff and volunteers.	2½ hours.
Do.	"Bunker Hill," June 25, 1956.	Control center exercise: involving control centers at all levels; continuation of Operation Lexington.	do.	do.	Do.
Do.	"Communications Test," July 1, 1955 through June 30, 1956.	Communications tests held at area and sector levels.	do.	50 civil defense staff and volunteers.	Weekly.
New Hampshire: Merrimack	Apr. 4, 1956.	To train local civil defense personnel in all phases of welfare services.	Town Hall simulated as welfare center.	30 civil defense workers, 50 townspeople.	1 day.
Andover	Apr. 5, 1956.	To train mobile support in civil defense welfare services.	School facilities.	150 civil defense volunteers.	¼ day.
Hudson	Apr. 7, 1956.	To train civil defense volunteers in emergency welfare services.	Town library.	30 civil defense volunteers.	Do.
Concord	Apr. 10-13, 1956.	Public health training in civil defense.	State House.	50.	
Nashua	Apr. 14, 1956.	To train civil defense volunteers in civil defense welfare services.	YMCA Hall.	60.	4 days.
Hudson	Apr. 21, 1956.	Training exercise involving all civil defense welfare services.	Local school.	30 civil defense workers, 150 townspeople.	
Nashua	May 26, 1956.	Practice exercise involving all welfare services.	Junior high school facilities.	60 welfare volunteers, 150 townspeople.	
Portsmouth	May 29-June 27, 1956.	Radiological defense training.	do.	16.	
Littleton	July 9-12, 1956.	do.	do.	20.	
State of New Hampshire	July 1, 1955-June 30, 1955.	Operations officers' instruction and orientation meeting with new civil defense directors.	40 communities.	100.	6 2-hour courses. 4 3-hour courses. Single briefing sessions.

Location	Operation name and date	Object or description	Area or facilities involved	Approximate number of participants	Time
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Region 1- Continued

New Jersey:					
State of New Jersey	"Muster" week of Oct. 23, 1955.	To test operational training efficiency in a statewide mobilization of all the State forces. Personnel and equipment were moved to mobilization points, support role being stressed. National Guard was mobilized. Pedestrians were instructed to take shelter during public participation phase.		252,000 civil defense volunteers, 15,000 National Guard.	1 week
Do.....	"Surprise," Feb. 23, 1956.	To test the attack warning communications system; to implement and test control center mustering plans at all levels; to activate and test adequacies of control center staffs on short notice and evaluate efficiency of local plans designed to alert key agencies and industries.	Statewide.	21 counties, 567 municipalities.	1 day
Do.....	"May Day," May 1, 1956.	To test air defense warning network and ability of public to follow instructions. To afford opportunity for every municipality to test their civil defense plans and organization.	do.	21 counties, 460 municipalities, 236,000 participants.	Do.
Do.....	Local tests.	Many municipalities and counties had local tests during the year to test plans and organization.			
New York:					
Yates County	July 15-16, 1955.	Evaluation of support area training.	Support area for city of Rochester.	500	2 days
Orleans County	Aug. 13, 1955.	To test public participation in an air raid alert at Junior Fair in Albion, the county seat.			10 minutes
Lockport	Aug. 19-20, 1955.	Evaluation of support area training.	Support area for city of Niagara Falls.	500	2 days
Rensselaer	Sept. 9-10, 1955.	do.	Support area for city of Troy.	500	Do.
Albany and Rensselaer	Sept. 23, 1955.	Test exercise and recruiting.			
Jamestown	Oct. 7-8, 1955.	Training exercise for support area participation.			
Plattsburg	Oct. 14-15, 1955.	Evaluation of support area training.	Support area for city of Plattsburg.	500	2 days
Auburn	Oct. 28-29, 1955.	do.	Support area for city of Syracuse.	500	Do.
Do.....	Oct. 29, 1955.	To test plans for evacuation of patients from County Home.		35 patients.	
White Plains	Nov. 4-5, 1955.	Evaluation of support area training.	Support area for New York City.	500	Do.
Washington County	Nov. 13, 1955.	Training.			
Middletown	Nov. 17, 1955.	Citywide participation in a test exercise and training of civil defense workers.			
Chautauqua County	Nov. 18-19, 1955.	Evaluation of support area training.	Support area for city of Buffalo.	300	Do.
White Plains	Nov. 25-26, 1955.	To test emergency service in a public alert.			
Tompkins County	Mar. 29, 1956.	Evaluation of support area training.	Support area for city of Binghamton.	500	1 day.
State of New York	Apr. 19, 1956.	Training personnel from the New York State Division of Veterans Affairs and volunteers of the New York State Civil Defense Commission in Message Center.	New York State Civil Defense Commission Headquarters.	40	Do.
New York City	Apr. 28, 1956.	Evaluation of all training held throughout New York City.	New York City	300	Do.
Monroe County	May 2, 1956.	Evacuation test.	Support area for city of Rochester.	500	Do.
Rockland County	May 6, 1956.	Evaluation of support area training.	Support area for New York City.	500	Do.
State of New York	May 17, 1956.	Training volunteers from New York State Department of Public Works and New York State Civil Defense Commission in Commissions Message Center.	Interim Control Center of New York State Commission.	75	Do.
Tompkins County	May 19, 1956.	Evaluation of support area training.	Support area for city of Binghamton.	500	Do.
Tioga County	May 26, 1956.	do.	do.	750	Do.
Chenango County	June 16, 1956.	do.	do.	300	Do.
Seneca County	June 27, 1956.	do.	Support area for city of Rochester.	300	Do.
Rhode Island:					
State of Rhode Island	July 1, 1955, through June 30, 1956.	Forty-eight exercises were held in the State of Rhode Island for the purpose of training people in communications, rescue, fire fighting, welfare, radiological, police, and medical services.	State and local areas	166	
Vermont:					
Bellows Falls	"Bellwind," May 24, 1956.	To train civil defense volunteers and the general public, by rehearsing operational procedures in evacuation of city under radioactive fallout conditions; to test evacuation routes, mass transportation, reception, registration, mass feeding, communications, and emergency hospital procedures.	Bellows Falls, Windsor and Chester, Vt.	500 civil defense volunteers, 2,000 others.	4 hours

In addition to the above exercises there have been numerous local exercises in New York State, some supervised by State officials and others carried on solely by local people. From July 1, 1955, through June 30, 1956, New York City had 1,709 such exercises unsupervised by the State and there were 617 similar exercises in other parts of the State. Most of these exercises lasted about 3 hours and were designed for the training of people assigned to some specific civil defense service. The total number of participants is not available. Service chiefs in the State Civil Defense Commission directed a number of exercises also for the training of people in their particular services with the number of participants ranging from 10 to 600.

Location	Operation name and date	Object or description	Area or facilities involved	Approximate number of participants	Time
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REGION 2

Maryland: Baltimore County	"Operation Seascope," Aug. 27, 1955.	Evacuation of people, using 60 small boats. Civil defense welfare, medical, fire, and police services were activated for exercise.	Area surrounding Glenn L. Martin plant.	900	
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REGION 3

Florida: Orlando	Dec. 12, 1955	To test evacuation of schools	5 schools	2,000	15 minutes
Do	Jan. 31, 1956	Evacuate Ferncreek Elementary School	1 school	728 pupils	14 minutes
Daytona Beach, Volusia County	Feb. 9, 1956	To test time to mobilize and train fixed support team.	3 command posts	207	3 minutes
Orlando	Feb. 15, 1956	Evacuate Concord Park Elementary School	1 school		
Georgia: Atlanta	School evacuation exercise 1956, Apr. 24, 1956.	Evacuate all school children in Atlanta	183 schools	30,000	
Savannah	"Operation Box Car II," May 17, 1956.	Evacuate all Savannah school pupils by railroad and automobiles, pupils walking to railroad yards.	51 schools	36,000 pupils, 1,500 box cars.	30 minutes
North Carolina: Charlotte	Nov. 9, 1955	Evacuate uptown business district, walking to loading areas.	Offices and stores in 14 blocks.	20,000	25 minutes

REGION 4

Illinois: Peoria	Feb. 26, 1956	Radiological monitoring and decontamination demonstration for "simulated" evacuees from fallout area. Lectures on radioactive fallout hazards and protective measures.		150	1 day
Springfield	June 24, 1956	Evacuate participants in civil defense meeting at State Office Building to State Fair Grounds because of simulated "Fallout Area." Mass feeding demonstration conducted for participants at reception area.	State Office Building	250	1 day

Indiana: Evansville	"Operation Good Neighbor," Mar. 10, 1956.	Evacuate 120 patients and 8,000 pieces of furniture from old St. Mary's Hospital across the city to new St. Mary's Hospital using 110 trucks and truck trailers.	1 complete hospital with patients and equipment.	700	1 day
Michigan: Muskegon	July 19-20, 1955	Mass feeding school with construction of field expedients and lectures on sanitation and radiological fallout.		80	2 days
Grand Rapids	Sept. 24, 1955	Feeding demonstration sponsored jointly by Boy Scout troops and local civil defense agency.		300	1 day
Battle Creek	Sept. 30 and Oct. 1, 1955	Feeding demonstration for instructors, sponsored by FODA region 4, with construction of field expedients, lectures on sanitation, water supply, radiological fallout, mess layouts, and foods to serve.		80 in instructor's course	2 days
Albion	"No Second Chance," Jan. 10, 1956.	General Demonstration. Sirens sounded alert of simulated attack. Schools evacuated; radio station simulated CONELRAD broadcast, fire, rescue, and first aid teams reported for duty. National Guard participated.	Speech Department of Albion College, Calhoun County Civil Defense organization.	4,000	1 day
Wisconsin: Milwaukee	June 9, 1956	Evacuees from Milwaukee reported to reception area (State Fair Grounds, West Allis, Wis.) Demonstration in registration, information, and mass feeding, including construction of field expedients, lectures on sanitation, water supply, and radiological contamination.		300	1 day

REGION 5

Arkansas: Cammack Village Springdale	Oct. —, 1955 April 1956	To test evacuation plans. The town of Springdale served as a reception area for 10,000 to 15,000 simulated evacuees from surrounding area.			
New Mexico: Los Alamos	May 2, 1956	Entire city was evacuated to a point 8 miles away.	City of Los Alamos		
Texas: Pasadena Carswell AFB	"Operation Recess," Dec. 7, 1955. June 1956	School children were evacuated from the town. In a surprise alert, entire base, including civilian employees. Military personnel and critical equipment were evacuated to a relocation site.	Schools Carswell AFB	1,300	

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STOCKPILING

The Federal Civil Defense Act of 1950 authorizes the FCDA administrator to "procure by condemnation or otherwise, construct, lease, transport, store, maintain, renovate or distribute materials and facilities for civil defense." * * *. Under this authorization FCDA has proceeded to buy and store large quantities of emergency supplies and equipment for use in time of need.

Congressional appropriations available for this program have totaled \$172,148,000 through fiscal year 1956. Through June 30, 1956, about \$170,000,000 of these funds had been obligated—approximately \$163,000,000 for medical supplies and equipment and nearly \$7,000,000 for engineering supplies. No engineering supplies were purchased under this program in fiscal years 1954 and 1955. Small amounts were ordered in fiscal year 1956 and additional funds were spent for maintenance and relocation of equipment purchased in former years.

Contracts were awarded for about \$170,000,000 worth of materials. Materials costing approximately \$144,000,000 had been delivered by June 30, 1956.

STATEMENT AS OF JUNE 30, 1956

Description	Program		Total
	Medical supplies and equipment	Engineering supplies	
Appropriations:			
Fiscal year 1951-52			\$66,400,000
Fiscal year 1953			20,000,000
Fiscal year 1954			27,500,000
Fiscal year 1955			26,000,000
Fiscal year 1956			32,248,000
Total			172,148,000
Funds obligated:			
Fiscal year 1951-52	\$60,095,244	\$5,563,537	65,658,781
Fiscal year 1953	18,572,849	999,316	19,572,165
Fiscal year 1954	27,005,355	* 10,951	27,016,306
Fiscal year 1955	25,674,800		25,674,800
Fiscal year 1956	31,774,128	132,116	32,173,681
		* 267,439	
Total	163,122,374	6,973,359	170,095,733
Contracts awarded:			
Fiscal year 1951-52	60,095,244	5,563,537	65,658,781
Fiscal year 1953	18,572,849	999,316	19,572,165
Fiscal year 1954	27,005,355	* 10,951	27,016,306
Fiscal year 1955	25,674,800		25,674,800
Fiscal year 1956	31,708,128	132,116	32,173,681
		* 267,439	
Total	163,117,374	6,973,359	170,090,733
Deliveries:			
Fiscal year 1951-52	59,917,266	5,544,979	65,462,245
Fiscal year 1953	18,379,480	982,497	19,361,977
Fiscal year 1954	26,974,223	* 10,951	26,985,174
Fiscal year 1955	21,176,488		21,176,488
Fiscal year 1956	10,807,698	175,514	11,083,212
Total	137,355,155	6,713,941	144,069,096

¹ Original appropriation was \$32,650,000. However \$402,000 was transferred to other appropriations—\$362,000 to "Procurement of equipment" and \$40,000 to "Maintenance of equipment" of other Federal agencies.

EXERCISES REPORTED—Continued

Location	Operation name and date	Object or description	Area or facilities involved	Approximate number of participants	Time
REGION 6					
Colorado:					
Denver:	Sept. 12, 1955.	Evacuation and treatment of simulated victims from fires and movement to emergency field hospital.		140	3 hours
Iowa:					
Des Moines:	Nov. 16-17, 1955.	Instructor's course on construction of field expedients, lectures on simulated and actual evacuation routes, and evacuation fallout, mess layouts, and foods to serve.		87 in instructor's course.	2 days
REGION 7					
Oregon:					
Portland:	"Green Light," Sept. 27, 1956.	Evacuate people by buses to reception camp, registration, and simulated mass feeding operation.	6 square miles.	100,000.	4 1/2 hours
Washington:					
Pierce County:	July 3, 1955.	Evacuation of 30,000 people to another part of the county, following established evacuation routes. Evacuees remained overnight, furnishing their own food, bedding, and supplies.	Cities of Tacoma and Eatonville.	125 (30 cars)	
TERRITORIES AND POSSESSIONS					
Puerto Rico:					
Ramsey AFB:	Feb. 24, 1953.	Evacuate civil and military personnel and families to reception areas.	Air Force base.		

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Procurement

For fiscal year 1956 FCDA had an appropriation of \$32,248,000. (The original appropriation was \$32,850,000 but \$402,000 was transferred to other appropriations—\$362,000 for FCDA operations and \$40,000 for civil defense functions of other Federal agencies.) Essentially all of these funds were obligated in fiscal year 1956. Over \$18 million went for the procurement of emergency hospitals and for backup reserves of medical supplies and equipment. Nearly \$5 million went into the blood and shock therapy program, nearly \$4½ million went for radiological defense items and smaller amounts for other programs as shown in the following table. About \$2.4 million was required for transportation, procurement service, maintenance of the engineering stockpile, packaging, and other miscellaneous expenses.

FUNDS OBLIGATED—Fiscal Year 1956

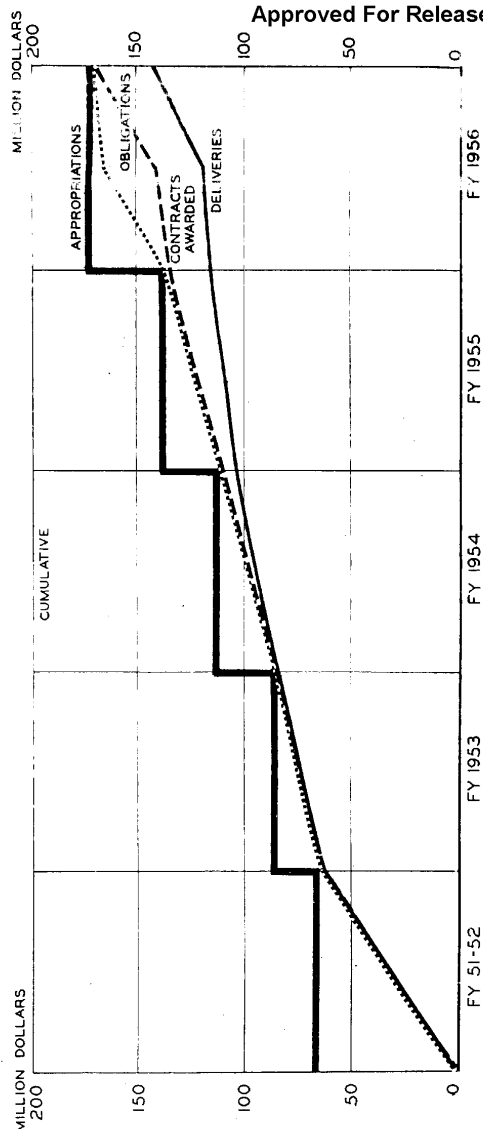
Item	Quantity	Cost	Total
Casualty care:			
Emergency hospitals.....	200	\$3,737,023	
Backup reserves.....	(1)	14,363,654	\$18,100,677
Biological warfare and disease control:			
Immunizing and treatment doses.....	28,220,000	1,892,410	1,892,410
Blood and shock therapy:			
Whole blood sets.....	565,200	932,160	
Plasma expanders.....	300,000	910,000	
Intravenous solutions (liters).....	4,333,124	1,686,549	
Nasogastric feedings.....	1,612,614	833,631	
Associated items.....		491,708	4,864,048
Chemical warfare defense:			
Atropine (dose).....	4,511,600	108,986	
Associated items.....		318,100	427,086
Radiological defense:			
Dosimeters.....	270,447	1,597,423	
Survey meters.....	104,408	2,720,532	
Associated items.....		164,181	4,482,136
Miscellaneous:			
Transportation, procurement service, maintenance of engineering stockpile, etc.....		2,407,354	2,407,354
Total funds obligated.....			32,173,681
Unobligated balance.....			74,319
Grand total.....			32,248,000

¹ Sufficient for 3 weeks, care of 1,000,000 casualties.

Procurement of Selected Items

Stockpiling of a large number of items of medical supplies and equipment has been in progress almost since the creation of FCDA. With continued changes in the destructive power of nuclear weapons and in the ability of potential enemies to deliver them, it has become practically impossible to estimate with any degree of accuracy the

FIGURE 11.—STOCKPILING
APPROPRIATIONS VS. OBLIGATIONS



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number of casualties which may result. Frequently it is impossible to establish meaningful requirements for such an eventuality. However, some progress has been made in procuring a large number of items which, in the judgment of FCDA officials, form a balanced program to take care of the most likely needs, in the event of attack.

Progress in the procurement of some of the more important selected items is shown in the following table. The number of items ordered and the number delivered relate to the entire period from the beginning of the program to June 30, 1956.

There is of necessity a sizable lag between orders and deliveries of most items. Deliveries of several items have kept pace reasonably well with orders, but in some cases deliveries are far behind. Only 201 of the 932 emergency hospitals ordered had been completely assembled and delivered ready for immediate use. The completion of one of these units requires the procurement and assembly of large numbers of individual items, followed by sorting, packaging, and grouping of the items in the unitization process. Although 32,500 gas masks had been ordered, none of them had been delivered by June 30, 1956.

PROCUREMENT PROGRESS—SELECTED ITEMS

Item	Unit of measure	Ordered number ¹	Delivered number ¹
Civil defense emergency hospitals	Each	932	201
Burn dressings (large and small)	do.	8,495,000	7,794,972
Blood recipient sets	do.	2,625,140	2,089,596
Blood derivatives (plasma and serum albumin)	Unit	1,501,427	1,510,013
Plasma expanders (PVP and dextran)	do.	4,284,146	3,770,277
Gas masks	Each	32,500	
Radiological dosimeters	do.	344,000	102,624
Radiological survey meters	do.	124,593	30,020
Atropine	Dose	637,036	500,000
Vaccines and antitoxins	do.	54,412,500	26,080,000
Paper blankets	Each	1,597,011	1,384,555
Litters	do.	227,402	152,900

¹ From beginning of program to June 30, 1956.

² Stored in custody of manufacturers.

Distribution of Radiological Instruments

In appropriating FCDA stockpiling funds for fiscal year 1956 the Congress (in Public Law 112, 84th Cong.) provided for the procurement of radiological instruments and detection devices by the Federal Civil Defense Administrator, and for the distribution of such instruments and devices to the several States and Territories, by loan or grant, for training and educational purposes, under such terms and conditions as the Administrator shall prescribe.

Under this authority FCDA proceeded to buy substantial quantities of radiological instruments and to make them available to the States

indicating a need for them on the basis of training programs and scheduled courses meeting standards approved by FCDA. Certain equipment has been granted to each State for continuing use, and additional quantities are loaned to States scheduling concurrently more than one training course.

As of June 30, 1956, FCDA had granted to the States 6,672 dosimeters, 713 dosimeter chargers, and 6,379 survey meters. On loan to the States were 417 dosimeters, 190 chargers, and 3,133 survey meters.

RADIOLOGICAL INSTRUMENTS LOANED OR GRANTED TO STATES

Region and State	Dosimeters		Dosimeter chargers		Survey meters	
	Loan	Grant	Loan	Grant	Loan	Grant
Grand total	417	6,672	190	713	3,133	6,379
Total—Continental United States	417	6,668	190	708	3,121	6,319
Region 1	146	3,440	39	284	173	3,571
Connecticut		320		163		379
Maine		600		9		650
Massachusetts		1,400		18		1,450
New Hampshire		200		11		275
New Jersey		800		20		509
New York	116		30		50	
Rhode Island		120		63		146
Vermont	30		9		20	
Region 2	183	672	18	44	670	972
Delaware						
District of Columbia		12		9	26	62
Kentucky				5		54
Maryland	31	200	8	5	60	230
Ohio	152	400	10	10	214	450
Pennsylvania		24		15	300	74
Virginia		32			42	82
West Virginia					19	
Region 3					11	
Alabama						
Florida						
Georgia					4	
Mississippi						
North Carolina						
South Carolina					7	
Tennessee						
Region 4	20	628	118	270	1,568	798
Illinois		500		245	88	600
Indiana		28		17		76
Michigan	4	20		5	71	70
Missouri	12		75	3	1,295	50
Wisconsin	4	80	43		114	
Region 5	38	28	8	20	92	78
Arkansas	10	28	2	20	50	78
Louisiana						
New Mexico	4				12	
Oklahoma	24		6		30	
Texas						

RADIOLOGICAL INSTRUMENTS LOANED OR GRANTED TO STATES—Continued

Region and State	Dosimeters		Dosimeter chargers		Survey meters	
	Loan	Grant	Loan	Grant	Loan	Grant
Region 6.....	6	320	4	47	263	670
Colorado.....	2	44	1	5	2	144
Iowa.....					26	
Kansas.....		32	3	19	61	82
Minnesota.....	4				44	50
Nebraska.....		200			50	250
North Dakota.....		4			10	54
South Dakota.....					10	
Wyoming.....		40		23		90
Region 7.....	24	1,580	3	43	404	230
Arizona.....					5	
California.....	12	1,500	3	3	80	150
Idaho.....					5	
Montana.....	4				5	
Nevada.....					25	
Oregon.....		80		40	264	80
Utah.....					5	
Washington.....	8				15	
Territories and possessions.....		4		5	12	60
Alaska.....						
American Samoa.....						
Canal Zone.....						
Guam.....						
Hawaii.....		4		5	8	54
Puerto Rico.....					2	6
Virgin Islands.....					2	

Prepositioning of Civil Defense Emergency Hospitals

In June 1956, FCDA announced a new program for distribution of civil defense emergency hospitals. The objective is to store these 200-bed hospitals at strategic points throughout the country in or near facilities which can be converted to hospital use in an emergency.

The plan is designed for the safe permanent storage of a hospital in unopened original containers at or near the place of eventual usage where it can be unpacked and put into operation with a minimum of delay in the event of an emergency. Storage sites are to be not closer than 15 miles to a Critical Target Area nor farther than 50 miles from the area to be supported. At least 15,000 square feet of acceptable space must be available for hospital operations. Actual storage space required for the packaged hospital is slightly over 1,800 cubic feet.

The plan is to be implemented through formal agreements with the States. Each State may obtain one or several of these hospitals for storage within its borders by signing an agreement with FCDA under which the State accepts responsibility for adequate custodial maintenance, and protective care according to established criteria. All acquisition and delivery costs are borne by the Federal Govern-

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ment. Subsequent costs for storage, care, and protection are borne by the State. Title to the property remains with the Federal Government.

It is the responsibility of the State to develop plans for the utilization of the hospitals during a civil defense emergency. Such plans are coordinated and approved by FCDA. Under terms and conditions prescribed by FCDA the hospitals may be made available for use in a natural disaster following declaration of a major disaster by the President under Public Law 875, 81st Congress.

Civil Defense Emergency Hospitals on Loan to States

During late 1955 and early 1956, a program was developed for distributing emergency hospitals to the States for purposes of display, education, and training.

Principal objectives are to develop in the field an understanding of techniques, requirements, and staffing patterns for setting up these hospitals in event of emergency. A State can obtain one or more of these hospitals by signing a formal loan agreement under which it accepts custody of the hospital for civil defense display, educational, and training purposes, agrees to pay charges for transportation from one city to another within the State, and accepts responsibility for loss or damage to the hospital or any of its components. Under this arrangement one-half the costs to a State may be returned under the Federal contributions program.

A total of 50 civil defense emergency hospitals has been set aside or approved for loan to the States for training and display purposes. As of June 30, 1956, 35 hospitals had actually been distributed to the States or shipment arrangements were in process. Initial destinations were as follows:

Region 1
Torrington, Conn.
Somerville, N. J.
Providence, R. I.
Barre, Vt.

Region 2
Wilmington, Del.
Washington, D. C.
Sykesville, Md.
Chillicothe, Ohio
Altoona, Pa.
Butler, Pa.
Reading, Pa.
Charleston, W. Va.

Region 3
Atlanta, Ga.
Memphis, Tenn.

Region 4
Indianapolis, Ind.
Detroit, Mich.
Rolla, Mo.

Region 5
Baylor, Tex.
Houston, Tex.

Region 6
Greeley, Colo.
Cedar Rapids, Iowa

Region 6--Continued

Topeka, Kans.
 Moose Lake, Minn.
 Oak Terrace, Minn.
 Omaha, Nebr.

Region 7

Chandler, Ariz.
 San Francisco, Calif.
 Boise, Idaho
 Warm Springs, Mont.

Reno, Nev.
 Salem, Oreg.
 Salt Lake City, Utah
 Seattle, Wash.

Territories and possessions

Honolulu, Hawaii

Other

Arnprior, Ontario, Canada

Warehousing

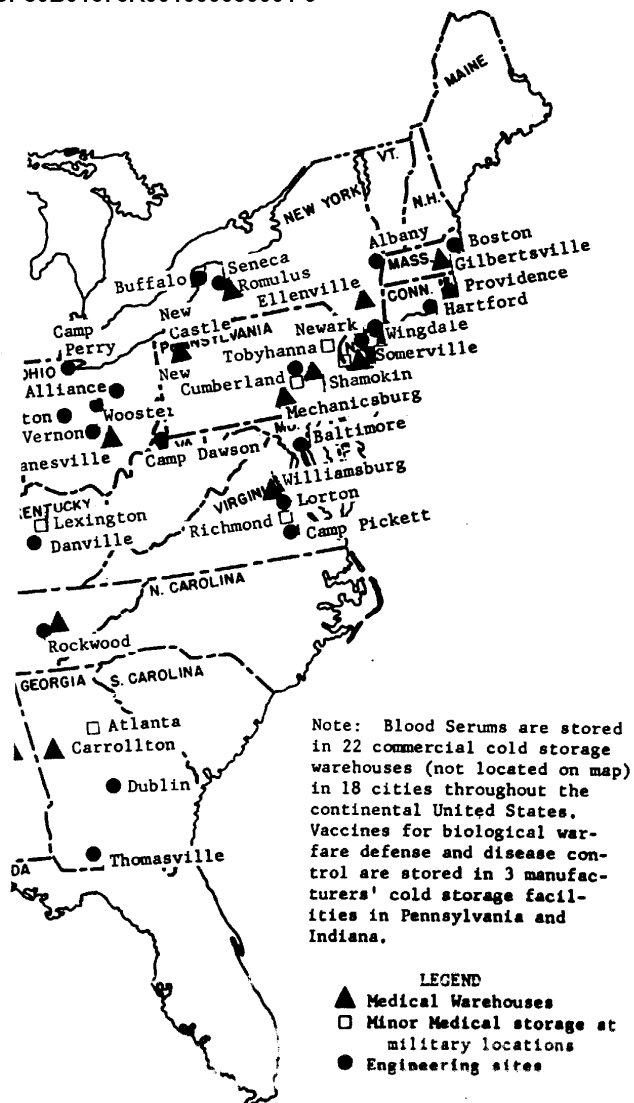
Most of FCDA's stockpiled materials are stored in 38 medical warehouses and at 32 engineering storage sites in Continental United States. Small quantities of medical supplies are in two warehouses in Hawaii and Puerto Rico. In addition, blood serums are stored in commercial cold storage warehouses in 18 cities, and vaccines are stored in several manufacturers' cold storage facilities.

Requirements for medical warehousing space have increased continuously over the years. As of June 30, 1956, total warehousing space available for this program was about 16,746,000 cubic feet. Of this amount 11,621,000 cubic feet were scheduled for occupancy.

Medical supplies and equipment are stored generally outside of Critical Target Areas but scattered through the country and near enough to large concentrations of people to be accessible in an emergency. Some of the warehouses are filled beyond normal capacity while others, acquired more recently, have a considerable amount of space. Figure 14 indicates the extent of space occupied in the individual facilities as of May 31, 1956, and the space scheduled for occupancy by June 30, 1956.

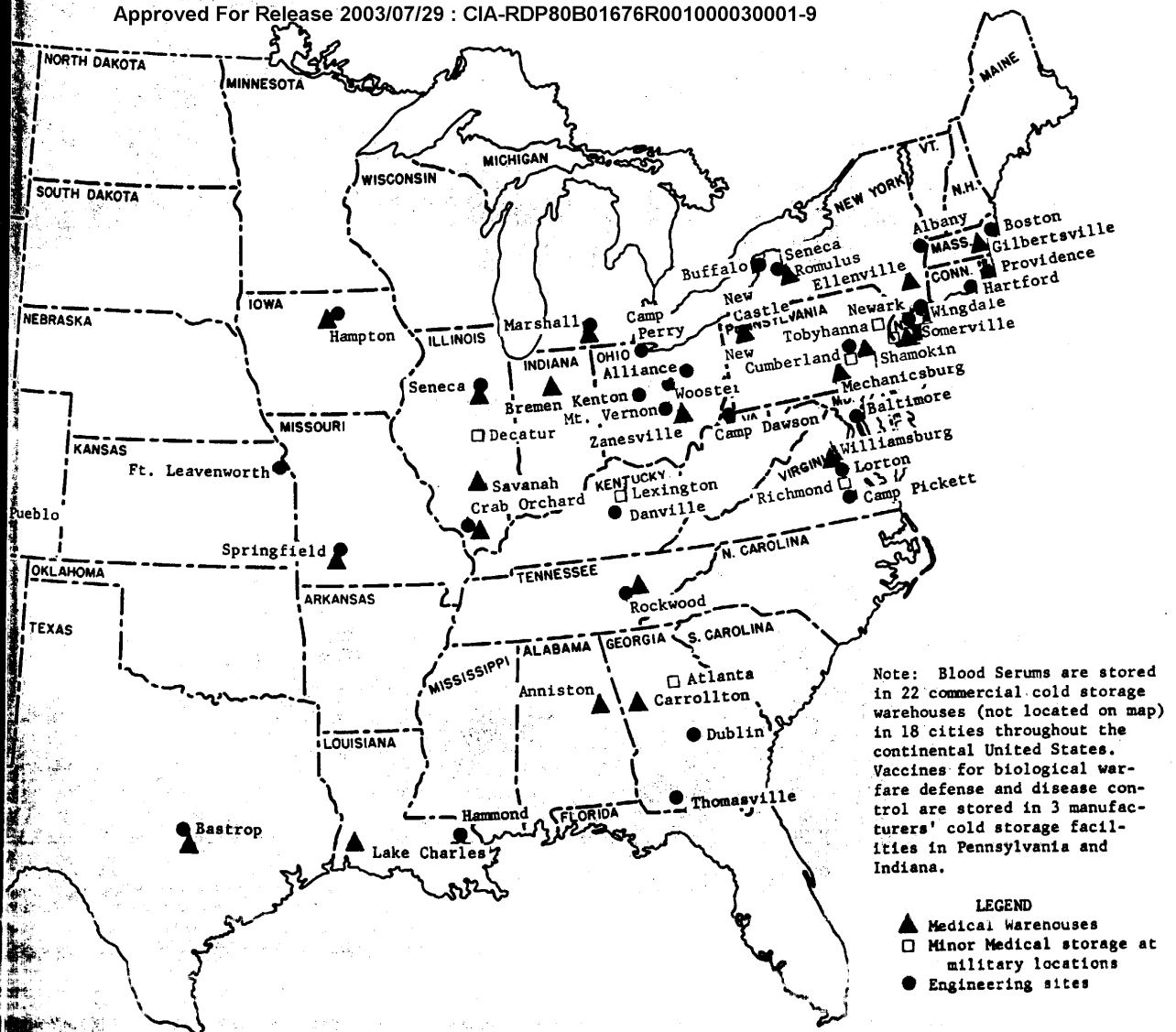
FINANCIAL AID TO STATES AND CITIES

The purpose of the Federal contributions program is to help the States and their political subdivisions to acquire essential civil defense material and equipment and help them promote civil defense education and training. The program operates under authority of the Federal Civil Defense Act of 1950 (Public Law 920, 81st Cong.) which authorized the Administrator of FCDA to make financial contributions to the States for civil defense purposes on the basis of programs and projects approved by the Administrator.



MEDICAL AND ENGINEERING STORAGE SITES

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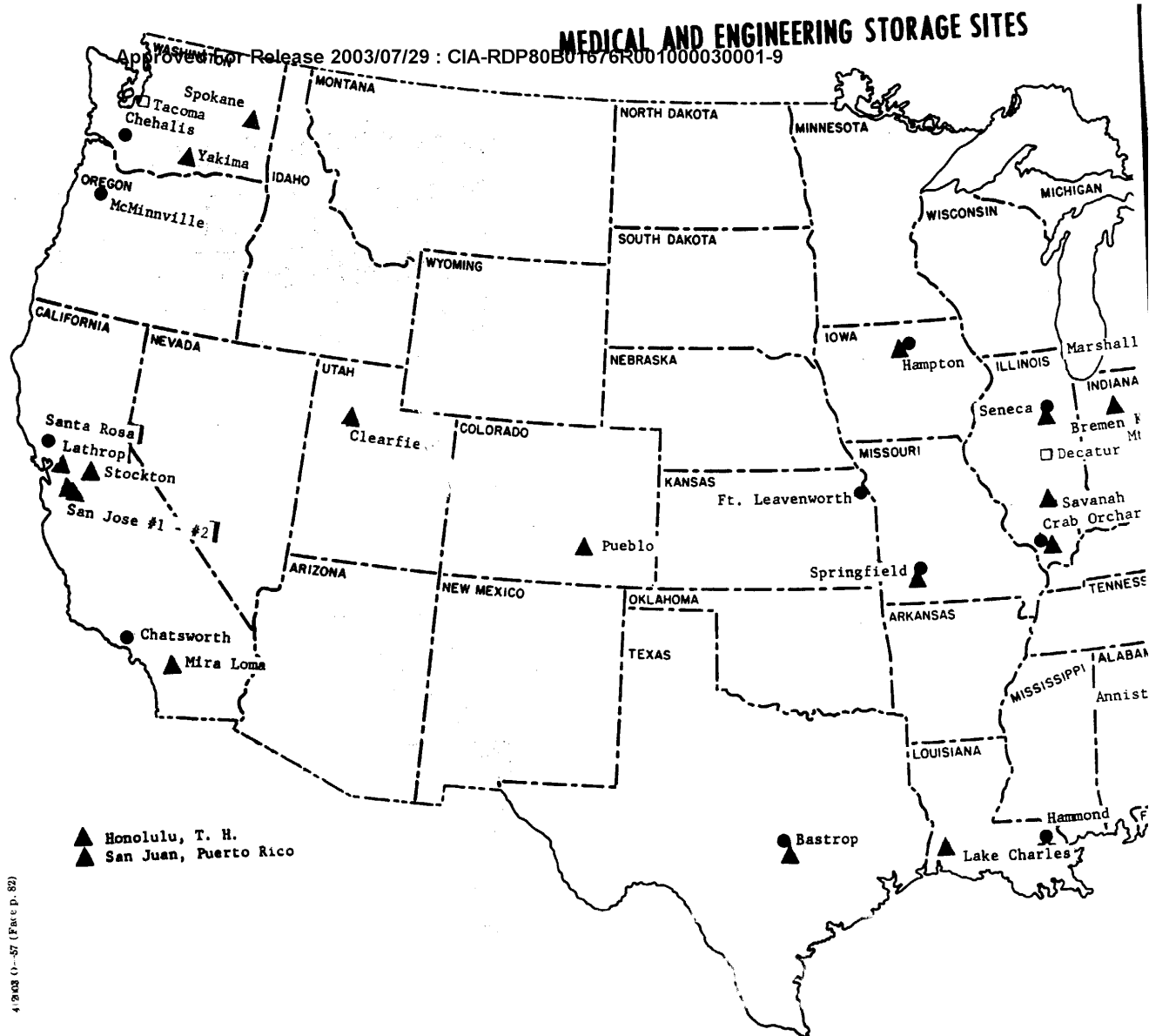


FIGURE 13.—MEDICAL WAREHOUSING—Total

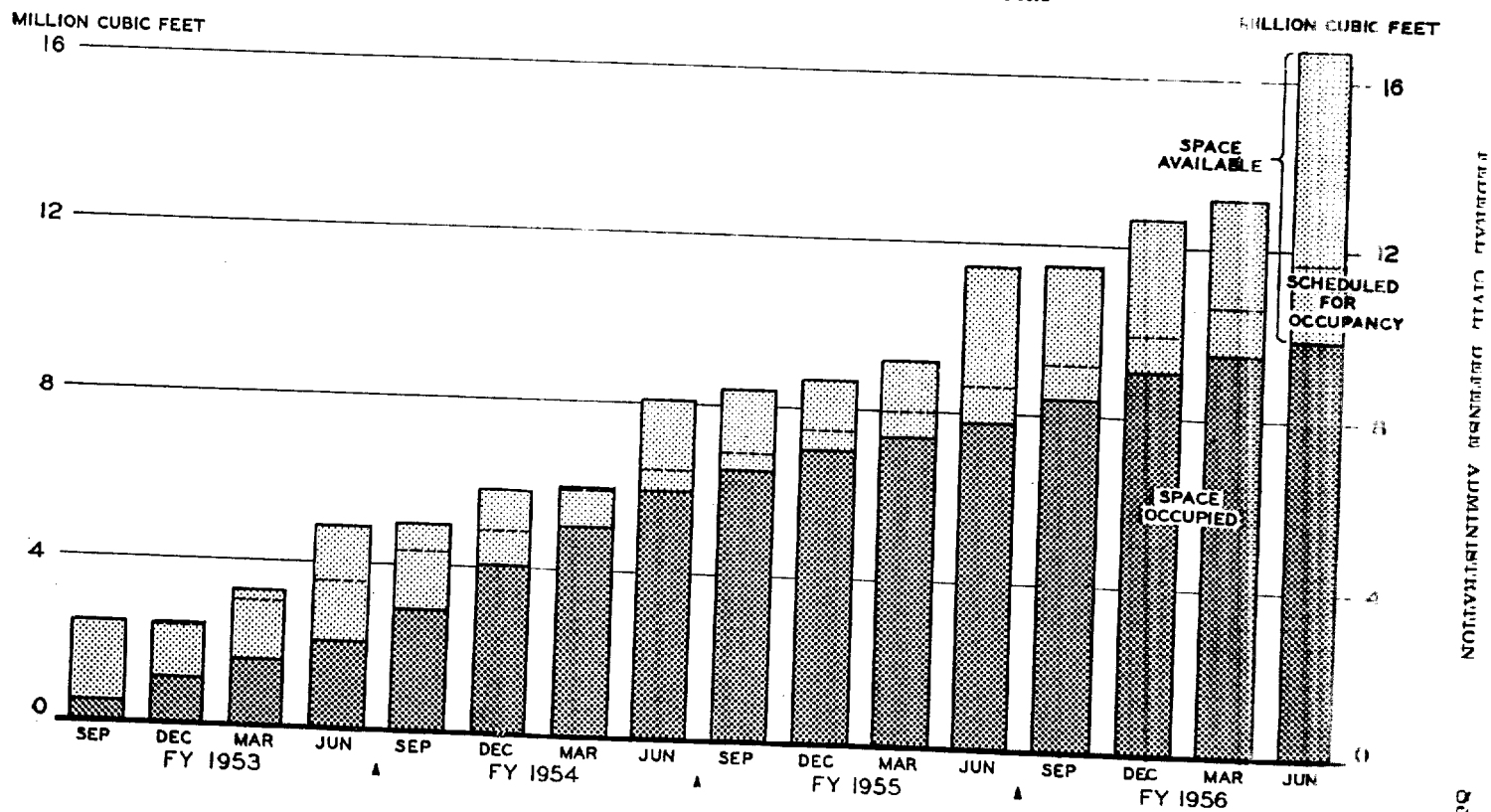
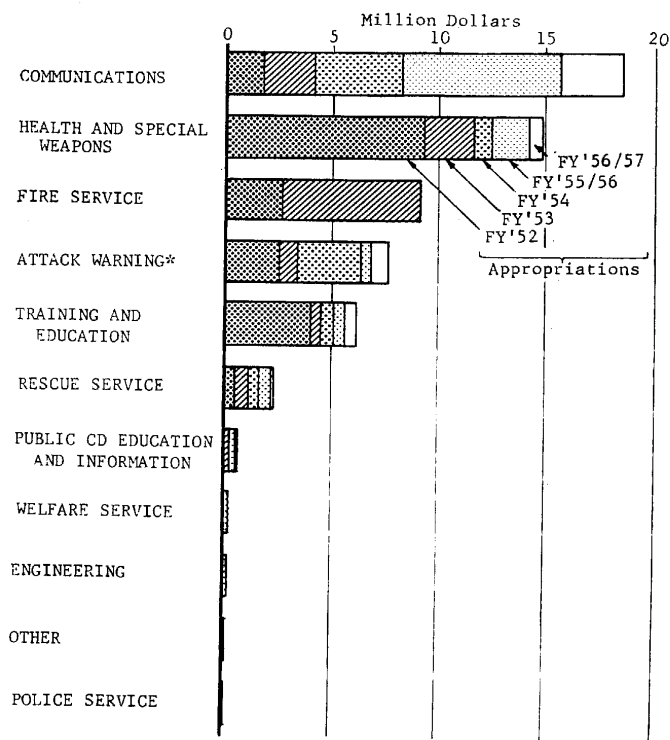


FIGURE 15—FEDERAL CONTRIBUTIONS
By Program

* Data for FY 1954 include obligations from the reappropriation in FY 1955.

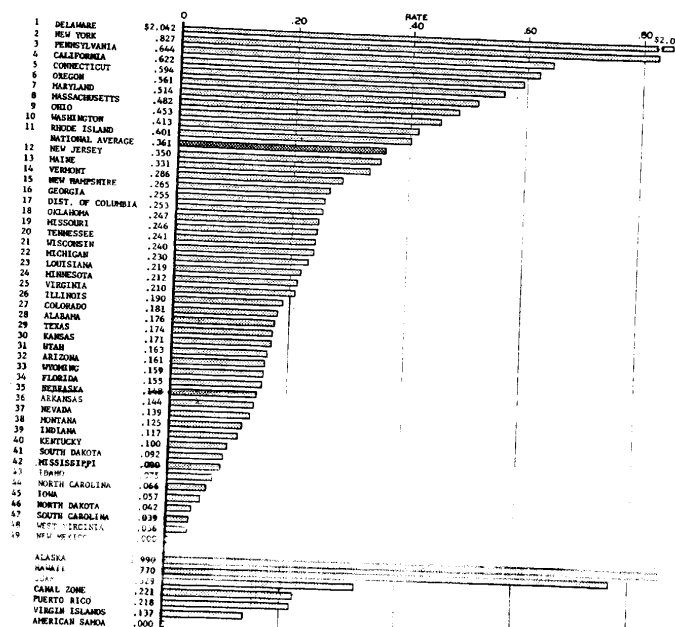
Federal Funds Obligated—By Region

Fiscal Year 1952 Through Fiscal Year 1956

Three-fourths of the total Federal contributions went to the States in FCDA Regions 1, 2, and 7. These are the States with heavy concentrations of population in the northeastern United States and on the west coast. New York, California, and Pennsylvania, in that order, were the three States receiving the largest amounts of Federal funds.

FCDA region	Federal funds obligated fiscal year 1952 through fiscal year 1956	
	Amount	Percent of total
Total	\$60,442,666	100.0
Region 1	19,870,573	32.9
Region 2	14,747,776	24.4
Region 3	3,376,637	5.6
Region 4	5,844,348	9.7
Region 5	2,925,820	4.8
Region 6	1,800,497	3.0
Region 7	10,541,429	17.4
Territories and possessions	1,335,586	2.2

The project applications approved during fiscal year 1956 were from funds which would come out of the 1955-56 appropriation of \$12,000,000 and the 1956-57 appropriation of \$12,400,000.

FIGURE 16
FEDERAL FUNDS OBLIGATED PER CAPITA*
1952 THROUGH 1956

Up to September 30, 1955, each State had been allocated a specified amount out of the 1955/56 appropriation against which project applications could be submitted. It became evident, however, that some States were not going to use all of the funds allotted while others had need of more than their initial allotments. During the second quarter of fiscal year 1956, therefore, FCDA regional administrators were authorized to approve project applications from the States on a first-come first-served basis in order to permit the States, with programs and projects ready, to move forward.

The 1956-57 appropriation of \$12,400,000 became available for obligation as of July 1, 1955. Allocations from this appropriation have been made to each region without specifying amounts available for each State. Regional administrators were authorized to approve applications against this appropriation on a first-come first-served basis within certain limits of maintaining balanced programs and assisting all States in moving ahead with their projects as they became ready.

Summary—All Programs

In the tables which follow, detailed statistics on the Federal contributions program are presented showing the extent of Federal funds obligated from the inception of the program through fiscal year 1954. Data are given for each program, broken down by FCDA region and State. Data are shown also on the progress of each State in procuring some of the more important items available for procurement in each program.

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)					
	Total	1956/57 ¹	1955/56 ¹	1953 ²	1954 ²	1953 and 1954 ²
Total	60,442,666	4,992,304	11,828,660	1,132,059	8,081,103	24,444,444
Region 1	19,870,573	2,089,211	3,570,070	249,101	1,835,229	12,634,639
Connecticut	1,330,527	202,792	192,549	26,050	207,763	70,312
Maine	259,171	46,040	118,246	7,074	54,808	49,359
Massachusetts	2,418,304	327,487	289,363	35,575	187,033	21,000
New Hampshire	147,346	35,670	36,650	9,335	27,349	1,000
New Jersey	1,894,869	128,901	305,318	17,035	236,202	1,000
New York	13,352,542	1,286,789	2,566,636	1,119,418	96,864	1,000
Rhode Island	339,158	10,864	50,062	967	5,889	1,000
Vermont	107,972	32,668	31,246			1,000
Region 2	14,747,776	1,238,567	3,454,541	467,352	1,375,274	8,321,000
Delaware	790,079	141,676	168,963	26,927	25,290	69,293
District of Columbia	215,985	1,528	34,777	7,000	1,230	171,000
Kentucky	301,855	7,925	159,931		10,607	1,000
Maryland	1,570,699	192,218	162,074	25,065	145,866	1,000
Ohio	4,061,589	210,828	2,255,230	42,346	302,471	1,000
Pennsylvania	7,182,828	572,530	1,547,630	362,287	701,292	1,000
Virginia	752,789	38,042	150,510	53,047	115,600	1,000
West Virginia	71,982	33,764	6,499		14,000	1,000

See footnotes at end of table.

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)					
	Total	1956/57 ¹	1955/56 ¹	1953 ²	1954 ²	1953 and 1954 ²
Region 3	3,376,637	324,722	1,015,015	76,253	651,989	1,308,658
Alabama	534,202	40,168	134,799	10,478	100,021	248,736
Florida	535,125	66,241	290,381	4,529	82,782	91,192
Georgia	923,065	93,361	249,874	18,020	225,450	326,360
Mississippi	189,624	12,115	77,020		70,481	29,828
North Carolina	281,572	80,863	98,751	11,282	39,871	56,105
South Carolina	89,326		18,261	20	61,886	9,169
Tennessee	823,723	31,974	150,839	31,744	61,798	547,268
Region 4	5,844,348	371,771	961,255	128,615	1,266,906	3,115,801
Illinois	1,777,114	75,022	139,911	43,280	406,407	1,112,494
Indiana	505,300	68,497	82,833		37,011	294,843
Michigan	1,066,256	110,630	312,803	20,475	259,911	962,437
Missouri	1,009,699	45,618	267,398	6,208	278,658	411,217
Wisconsin	885,979	72,004	158,310	36,536	284,919	334,210
Region 5	2,925,820	415,150	857,705	41,835	790,304	820,828
Arkansas	258,255	57,098	128,077		58,079	15,001
Louisiana	639,904	71,329	132,051	13,032	115,830	307,662
New Mexico	535,116	82,809	135,737	1,964	111,154	204,452
Oklahoma	1,491,545	203,914	461,840	26,839	505,241	293,711
Texas						
Region 6	1,600,407	148,983	337,073	62,708	316,558	935,175
Colorado	280,032	18,187	76,707	5,305	69,890	110,033
Iowa	132,232	2,951	35,063	11,000	53,359	49,359
Kansas	352,101	1,493	41,026		42,569	287,013
Minnesota	674,262	90,801	79,068	46,403	73,903	384,117
Nebraska	204,342	21,504	38,556		54,628	89,654
North Dakota	26,756	4,722	662			21,342
South Dakota	61,981	8,780	46,476		5,945	790
Wyoming	48,761	645	19,485		16,354	12,377
Region 7	10,541,429	365,136	1,451,400	96,043	1,647,596	6,981,254
Arizona	157,599	3,290	52,953		50,734	50,622
California	8,100,850	222,239	906,973	55,948	1,172,890	5,743,250
Idaho	45,039	1,253	31,102		13,584	17,600
Montana	79,328	1,216	40,481	2,575	17,711	1,000
Nevada	31,360		13,720			17,345
Oregon	936,850	68,355	233,967	10,813	267,679	356,030
Utah	127,351	986	14,552	12,764	44,314	54,726
Washington	1,062,632	67,738	158,632	16,943	80,084	741,615
Territories and possessions	1,335,586	38,664	181,601	10,152	97,247	1,007,922
Alaska	413,838	3,773	5,246	6,515	11,037	387,267
American Samoa	11,948		1,560		1,637	7,161
Canal Zone	10,411		665			18,746
Guam	401,907	2,220	62,935		35,687	301,155
Hawaii	485,100	31,442	110,166	2,077	48,433	292,982
Puerto Rico	3,292	1,229	1,029		453	581
Virgin Islands						

¹ Applications approved by regional administrators prior to entry on official FCDA records at National Headquarters.
² Adjusted for firm contracts, cancellations, and amendments.

ATTACK WARNING

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)				
	Total	1956/57	1955/56	1955	1954
Total	7,601,837	651,982	523,042	1,132,059	1,576,052
Region 1	1,885,041	198,257	186,705	249,101	421,643
Connecticut	157,893	24,733	5,460	26,050	40,950
Maine	36,676	3,084	9,494	7,674	16,434
Massachusetts	336,561	16,603	12,452	35,575	69,804
New Hampshire	16,511	1,791	3,187	9,335	2,194
New Jersey	176,102	7,812	51,739	17,035	55,190
New York	1,065,750	136,660	98,524	162,565	180,094
Rhode Island	91,037	5,474	4,375	56,993	34,355
Vermont	4,511	2,070	1,474	967	
Region 2	2,027,214	243,332	138,392	467,352	164,725
Delaware	66,198	2,447	1,743	26,927	8,466
District of Columbia	78,926	115		7,000	
Kentucky	28,350		28,350		
Maryland	232,040	21,043	4,908	25,095	16,574
Ohio	561,234	54,490	5,211	42,546	22,781
Pennsylvania	884,955	128,327	91,725	332,237	102,153
Virginia	132,457	3,701	5,268	33,547	12,181
West Virginia	43,034	32,589	1,157	2,570	
Region 3	470,591	7,053	34,731	76,253	131,449
Alabama	64,793	737	8,073	10,478	13,796
Florida	102,530		12,272	4,529	40,423
Georgia	104,000	1,567		18,020	33,667
Mississippi	15,725		5,327	180	
North Carolina	61,078	3,861	8,638	11,282	24,212
South Carolina	10,804		396	20	10,398
Tennessee	111,541	858	25	31,744	8,953
Region 4	989,134	41,160	68,661	128,615	302,619
Illinois	364,711	18,875	6,183	43,280	128,566
Indiana	97,133	5,342	16,871	22,116	25,001
Michigan	170,388	5,362	20,508	20,475	21,733
Missouri	229,184	2,099	20,088	6,208	96,056
Wisconsin	127,658	13,192	5,011	36,536	29,261
Region 5	382,832	35,389	35,463	41,835	195,309
Arkansas	298		298		
Louisiana	57,556		6,957	13,032	17,027
New Mexico					
Oklahoma	52,223	11,636	1,250	1,964	36,027
Texas	272,755	23,750	26,958	26,839	142,215
Region 6	356,120	27,063	8,227	62,708	101,129
Colorado	36,387		279	5,305	2,163
Iowa	48,837	1,500		11,000	31,540
Kansas	45,921	290	2,217		9,136
Minnesota	183,907	19,963	3,824	46,403	49,451
Nebraska	23,366		1,907		4,540
North Dakota	1,925	1,925			
South Dakota	3,395	3,395			
Wyoming	12,352				4,257
Region 7	1,335,441	98,253	45,627	96,043	523,854
Arizona	35,029				16,956
California	1,057,673	97,191	35,782	52,948	461,481
Idaho					
Montana	14,282			2,575	11,677
Nevada					
Oregon	4,367	1,562	2,338	16,813	1,057
Utah	21,009			12,784	6,589
Washington	150,271		7,507	16,943	23,094
Territories and possessions	155,464	1,478	5,236	10,152	35,364
Alaska	103,364	1,478		6,515	963
American Samoa					
Canal Zone	4,649			1,560	1,560
Guam	4,728				
Hawaii	22,237				22,237
Puerto Rico	20,435		3,676	2,077	10,574
Virgin Islands					

ATTACK WARNING

Region and State	Recurring charges approved (dollars)				Selected items approved for procurement	
	Total	Fiscal year 1956	Fiscal year 1955	Fiscal year 1954	Sirens (units)	Bell and light installations (units)
Total	629,211	216,885	236,807	175,519	9,050	2,064
Region 1	185,905	22,757	86,480	76,668	2,833	268
Connecticut	31,935	12,644	9,245	10,046	290	36
Maine					32	
Massachusetts	8,899	5,861	275	2,763	383	110
New Hampshire	230		230		20	24
New Jersey	2,513				288	2
New York	142,328	1,739	76,730	63,859	1,702	92
Rhode Island					14	
Vermont						
Region 2	220,366	93,179	89,560	37,627	2,268	750
Delaware					64	
District of Columbia	175	115		60	18	
Kentucky					315	210
Maryland	74,554	62,023	5,706	6,825	414	102
Ohio	39,554	11,003	12,539	15,922	1,291	341
Pennsylvania	92,219	14,473	66,260	11,486	143	7
Virginia	12,707	4,318	5,055	3,334	23	
West Virginia	1,157	1,157				
Region 3	19,988	9,584	7,591	2,813	393	174
Alabama	5,964	2,433	3,267	294	52	65
Florida	1,839	1,101	50	688	49	24
Georgia	5,570	3,379	1,069	1,102	144	58
Mississippi	180				10	1
North Carolina	684	396			74	13
South Carolina	576	396			10	
Tennessee	5,175	1,879	2,537	759	54	18
Region 4	68,254	26,147	19,702	23,405	1,068	279
Illinois	12,773	4,388	3,861	4,524	290	119
Indiana	4,477	2,280	1,488	709	138	36
Michigan	7,157	2,908	1,731	2,518	95	56
Missouri	22,240	9,342	6,163	6,735	254	4
Wisconsin	22,607	7,229	6,459	8,919	291	64
Region 5	11,653	5,825	5,204	624	386	115
Arkansas					1	
Louisiana	8,025	4,417	3,608		105	37
New Mexico						
Oklahoma	3,628	1,408	1,596	624	64	78
Texas					216	
Region 6	5,639	2,051	1,193	2,395	297	190
Colorado	2,539		743	1,796	33	
Iowa	283			283	71	55
Kansas					45	1
Minnesota	2,244	1,643	450	151	132	134
Nebraska	548	383		165	4	
North Dakota	25	25			1	
South Dakota					4	
Wyoming					3	
Region 7	110,248	54,304	25,517	30,427	1,691	268
Arizona					7	
California	102,749	51,981	22,893	27,955	1,408	248
Idaho						
Montana					19	
Nevada						
Oregon	1,576	643	508	187	18	2
Utah					19	
Washington	6,121	1,730	2,380	2,332	136	38

ATTACK WARNING—Continued

Region and State	Recurring charges approved (dollars)				Selected items approved for procurement	
	Total	Fiscal year 1956	Fiscal year 1955	Fiscal year 1954	Sirens (units)	Ball and light balloons (units)
Territories and possessions.....	6,158	3,038	1,560	1,560	124	
Alaska.....	1,478	1,478			47	
American Samoa.....						
Canal Zone.....	4,680	1,560	1,560	1,560		
Guam.....					27	
Hawaii.....					15	
Puerto Rico.....					47	
Virgin Islands.....						

COMMUNICATIONS

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)				
	Total	1956/57	1955/56	1954	1953 and 1952
Total.....	18,526,260	2,823,092	7,486,282	4,091,125	4,125,761
Region 1.....	4,786,473	1,035,714	1,461,365	817,225	1,472,169
Connecticut.....	427,320	143,126	124,090	91,722	4,000
Maine.....	116,646	26,940	58,742	23,460	1,000
Massachusetts.....	585,834	197,711	167,779	84,363	1,000
New Hampshire.....	77,176	26,990	27,270	12,985	1,000
New Jersey.....	396,763	96,564	115,398	56,966	1,000
New York.....	2,986,354	506,761	920,186	518,159	1,000
Rhode Island.....	104,446	13,810	27,246	25,130	1,000
Vermont.....	51,934	23,792	20,054	4,788	1,000
Region 2.....	4,604,061	622,198	2,432,404	808,111	79,000
Delaware.....	272,752	73,024	110,150	4,263	1,000
District of Columbia.....	16,283	1,413	13,455	1,230	1,000
Kentucky.....	132,111		117,439	10,607	1,000
Maryland.....	281,491	45,944	50,529	33,152	1,000
Ohio.....	1,416,828	76,723	1,064,038	99,310	1,000
Pennsylvania.....	2,226,980	420,192	956,188	575,025	1,000
Virginia.....	218,789	3,477	87,790	58,281	1,000
West Virginia.....	19,427	1,425	3,815	6,243	1,000
Region 3.....	1,700,132	273,131	770,265	402,912	28,000
Alabama.....	243,520	36,187	95,979	46,517	1,000
Florida.....	310,565	41,573	212,562	40,300	1,000
Georgia.....	481,964	83,553	195,017	152,971	1,000
Mississippi.....	135,829	12,115	44,535	61,643	1,000
North Carolina.....	151,620	71,089	88,290	7,401	1,000
South Carolina.....	66,353		17,855	51,498	1,000
Tennessee.....	307,251	28,014	136,057	42,563	1,000
Region 4.....	1,970,822	269,966	652,083	614,539	28,000
Illinois.....	501,240	45,408	199,701	199,754	1,000
Indiana.....	107,162	63,835	26,803	8,474	1,000
Michigan.....	676,800	98,750	223,330	184,910	1,000
Missouri.....	458,298	34,232	232,634	142,805	1,000
Wisconsin.....	227,313	5,731	62,015	79,598	1,000
Region 5.....	1,753,567	369,036	607,379	501,802	28,000
Alabama.....	227,002	59,672	115,651	52,131	1,000
Louisiana.....	287,428	54,766	94,701	79,142	1,000
New Mexico.....	294,561	29,364	78,690	49,037	1,000
Oklahoma.....	948,585	172,364	408,337	321,492	1,000
Texas.....					1,000

COMMUNICATIONS—Continued

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)				
	Total	1956/57	1955/56	1954	1953 and 1952
Region 6.....	608,472	95,781	255,570	172,717	84,404
Colorado.....	153,931	17,382	63,218	64,110	9,221
Iowa.....	60,088	1,451	35,063	20,488	3,086
Kansas.....	67,050	593	23,505	20,974	21,878
Minnesota.....	116,115	57,274	40,015	2,534	16,280
Nebraska.....	124,916	10,722	34,182	46,837	33,175
North Dakota.....	2,979	2,542	437		
South Dakota.....	57,058	5,385	45,728	5,945	
Wyoming.....	26,535	432	13,319	11,829	755
Region 7.....	2,783,985	200,988	1,096,450	733,778	752,769
Arizona.....	73,781	1,942	40,954	30,739	5,146
California.....	1,838,096	74,455	736,452	431,221	595,965
Idaho.....	45,399	1,153	30,948	13,298	
Montana.....	52,017	1,115	40,373	5,822	4,707
Nevada.....	12,831		12,831		
Oregon.....	471,194	64,203	172,892	186,812	47,287
Utah.....	61,876		10,462	34,286	17,128
Washington.....	223,791	58,120	51,538	31,600	82,533
Territories and possessions.....	338,168	35,258	120,766	40,051	142,093
Alaska.....	72,858	2,295			70,563
American Samoa.....					
Canal Zone.....					
Guam.....	4,174				4,174
Hawaii.....	38,266	900	25,156	2,067	10,143
Puerto Rico.....	221,040	31,300	94,996	37,531	57,213
Virgin Islands.....	1,830	763	614	453	

COMMUNICATIONS

Region and State	Recurring charges approved (dollars)				Selected items approved for procurement (units)		
	Total	Fiscal year 1956	Fiscal year 1955	Fiscal year 1954	Transmitter-receivers		
					Base station	Mobile	Portable
Total.....	521,432	246,640	61,440	213,352	6,514	28,801	8,428
Region 1.....	243,194	131,506	6,471	105,217	1,306	6,640	2,181
Connecticut.....	15,800	10,203	5,364	222	130	693	219
Maine.....	2,025	2,025			54	223	158
Massachusetts.....	16,964	7,464	1,067	7,409	291	1,040	385
New Hampshire.....					32	149	67
New Jersey.....	4,428	2,587		1,841	187	565	213
New York.....	201,179	107,023		94,156	557	3,688	1,127
Rhode Island.....	3,181	1,563		1,568	44	223	44
Vermont.....	621	621			11	59	18
Region 2.....	94,328	37,978	14,963	41,387	1,348	7,667	2,578
Delaware.....	2,132	1,255	524	353	48	358	54
District of Columbia.....	4,087	1,418	1,466	1,160		380	21
Kentucky.....					62	287	311
Maryland.....	9,208	3,663	2,553	2,992	91	287	21
Ohio.....	21,281	16,463	3,712	2,116	234	2,526	181
Pennsylvania.....	55,086	15,383	6,719	33,844	828	3,890	1,868
Virginia.....	1,984	811		1,173	67	269	145
West Virginia.....					18	17	

COMMUNICATIONS

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ENGINEERING

Region and State	Recurring charges approved (dollars)				Selected items approved for procurement (units)		
	Total	Fiscal year 1956	Fiscal year 1955	Fiscal year 1954	Transmitter-receiver		
					Base station	Mobile	Portable
Region 3.....	8,022	2,448	3,403	2,171	849	3,370	26
Alabama.....	2,513	121	972	1,420	131	479	1
Florida.....	1,694	1,255	326	113	188	471	1
Georgia.....	836	.....	836	.....	163	1,081	1
Mississippi.....	1,041	.....	851	210	60	370	1
North Carolina.....	.....	.....	.....	.....	18	130	1
South Carolina.....	.....	.....	.....	.....	101	211	1
Tennessee.....	1,938	1,072	438	428	188	638	1
Region 4.....	36,948	23,470	4,655	8,823	643	2,778	1
Illinois.....	20,678	13,781	4,282	2,615	168	731	1
Indiana.....	10,368	7,517	.....	2,876	66	268	1
Michigan.....	4,102	1,855	.....	2,247	187	843	1
Missouri.....	1,775	317	373	1,085	29	722	1
Wisconsin.....	.....	.....	.....	.....	194	194	1
Region 5.....	4,849	1,013	638	3,198	685	4,008	1
Arkansas.....	2,335	.....	.....	2,335	78	497	1
Louisiana.....	.....	.....	.....	.....	112	638	1
New Mexico.....	670	430	240	.....	145	630	1
Oklahoma.....	1,844	583	398	863	350	2,240	1
Texas.....	.....	.....	.....	.....	.....	.....	1
Region 6.....	4,409	2,143	1,476	790	284	1,237	1
Colorado.....	905	905	.....	.....	33	461	1
Iowa.....	.....	.....	.....	.....	20	163	1
Kansas.....	3,497	1,238	1,476	783	68	105	1
Minnesota.....	.....	.....	.....	.....	59	115	1
Nebraska.....	.....	.....	.....	.....	65	243	1
North Dakota.....	.....	.....	.....	.....	7	11	1
South Dakota.....	.....	.....	.....	.....	37	136	1
Wyoming.....	7	.....	.....	7	2	1	1
Region 7.....	129,631	48,082	29,834	51,715	1,136	2,776	1
Arizona.....	.....	.....	.....	.....	12	41	1
California.....	126,020	46,324	29,834	49,862	864	1,814	1
Idaho.....	.....	.....	.....	.....	22	95	1
Montana.....	.....	.....	.....	.....	24	95	1
Nevada.....	.....	.....	.....	.....	67	113	1
Oregon.....	.....	.....	.....	.....	20	129	1
Utah.....	3,611	1,758	.....	1,853	120	160	1
Washington.....	.....	.....	.....	.....	.....	.....	1
Territories and possessions.....	51	.....	.....	51	263	339	1
Alaska.....	.....	.....	.....	.....	6	40	1
American Samoa.....	.....	.....	.....	.....	7	7	1
Canal Zone.....	.....	.....	.....	.....	.....	.....	1
Guam.....	.....	.....	.....	.....	.....	.....	1
Hawaii.....	51	.....	.....	51	24	9	1
Puerto Rico.....	.....	.....	.....	.....	225	278	1
Virgin Islands.....	.....	.....	.....	.....	1	1	1

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriations)			Selected items approved for procurement					
	Total ²	1956/57	1955/56	8-inch steel pipe and fittings ³	Portable generators	Portable pumps	Water chlorinators	Water purification units	
Total.....	431,822	165,948	265,874	300	149	40	9	1	
Region 1.....	95,231	45,145	50,086	.....	53	6	.....	1	
Connecticut.....	7,692	3,590	4,102	.....	3	.....	.....	.....
Maine.....	6,237	1,229	5,008	.....	11	.....	.....	.....
Massachusetts.....	27,589	21,435	6,154	.....	22	3	.....	.....
New Hampshire.....	12,291	3,223	9,068	.....	2	.....	.....	.....
New Jersey.....	37,931	15,668	22,263	.....	2	1	.....	.....
New York.....	2,677	.....	2,677	.....	7	3	.....	.....
Rhode Island.....	814	.....	814	.....	.....	.....	.....	.....
Vermont.....	.....	.....	.....	.....	.....	.....	.....	.....
Region 2.....	160,455	56,829	93,626	300	54	32	3	.....
Delaware.....	2,136	1,533	603	.....	1	.....	.....	.....
District of Columbia.....	.....	.....	.....	.....	.....	.....	.....	.....
Kentucky.....	19,675	7,175	12,500	.....	5	.....	.....	.....
Maryland.....	25,358	21,258	4,100	.....	11	26	2	.....
Ohio.....	14,368	12,388	1,980	.....	2	1	.....	.....
Pennsylvania.....	87,534	13,425	74,109	300	2	5	1	.....
Pennsylvania.....	1,384	1,060	324	.....	2	.....	.....	.....
West Virginia.....	.....	.....	.....	.....	.....	.....	.....	.....
Region 3.....	27,593	18,705	8,888	.....	7	.....	.....	.....
Alabama.....	808	808	.....	.....	.....	.....	.....	.....
Florida.....	14,750	14,750	.....	.....	5	.....	.....	.....
Georgia.....	9,354	2,157	7,197	.....	1	.....	.....	.....
Mississippi.....	.....	.....	.....	.....	.....	.....	.....	.....
North Carolina.....	1,691	.....	1,691	.....	1	.....	.....	.....
South Carolina.....	.....	.....	.....	.....	.....	.....	.....	.....
Tennessee.....	990	990	.....	.....	.....	.....	.....	.....
Region 4.....	50,920	32,874	27,046	.....	15	1	.....	.....
Illinois.....	7,199	2,668	4,531	.....	3	.....	.....	.....
Indiana.....	11,244	911	10,333	.....	5	.....	.....	.....
Michigan.....	8,850	.....	8,850	.....	4	1	.....	.....
Missouri.....	3,627	3,627	.....	.....	.....	.....	.....	.....
Wisconsin.....	32,000	25,668	6,332	.....	3	.....	.....	.....
Region 5.....	1,561	.....	1,561	.....	1	.....	.....	.....
Arkansas.....	.....	.....	.....	.....	.....	.....	.....	.....
Louisiana.....	.....	.....	.....	.....	.....	.....	.....	.....
New Mexico.....	.....	.....	.....	.....	.....	.....	.....	.....
Oklahoma.....	.....	.....	.....	.....	.....	.....	.....	.....
Texas.....	1,561	.....	1,561	.....	1	.....	.....	.....
Region 6.....	14,416	5,090	9,326	.....	3	1	.....	.....
Colorado.....	136	.....	136	.....	.....	.....	.....	.....
Iowa.....	.....	.....	.....	.....	.....	.....	.....	.....
Kansas.....	397	.....	397	.....	.....	.....	.....	.....
Minnesota.....	13,883	5,090	8,793	.....	3	1	.....	.....
Nebraska.....	.....	.....	.....	.....	.....	.....	.....	.....
North Dakota.....	.....	.....	.....	.....	.....	.....	.....	.....
South Dakota.....	.....	.....	.....	.....	.....	.....	.....	.....
Wyoming.....	.....	.....	.....	.....	.....	.....	.....	.....
Region 7.....	83,646	7,305	75,341	.....	16	.....	6	.....
Arizona.....	1,216	1,216	.....	.....	.....	.....	.....	.....
California.....	32,104	354	31,750	.....	5	.....	1	.....
Idaho.....	154	.....	154	.....	1	.....	.....	.....
Montana.....	.....	.....	.....	.....	.....	.....	.....	.....
Nevada.....	.....	.....	.....	.....	.....	.....	.....	.....
Oregon.....	1,450	.....	1,450	.....	.....	.....	.....	.....
Utah.....	.....	.....	.....	.....	.....	.....	.....	.....
Washington.....	47,822	5,735	41,787	.....	10	.....	.....	.....

ENGINEERING—Continued

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)			Selected items approved for procurement					
	Total	1956/57	1955/56	8-inch steel pipe and fittings	Portable generators	Portable pumps	Water chlorinators	Water pump-out units	Water pump-out units
Territories and possessions.....									
Alaska.....									
American Samoa.....									
Canal Zone.....									
Guam.....									
Hawaii.....									
Puerto Rico.....									
Virgin Islands.....									

¹ Number of feet.
² Not programmed for fiscal year 1952. Funds obligated for engineering in fiscal year 1953 and 1954 are under other services.

FIRE SERVICE¹

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)			Selected items approved for procurement (units)					
	Total	1953	1952	Pump-ers	Port-able gener-ators	Port-able pumps	1½ inch hose (feet)	2½ inch hose (feet)	2½ inch hose (feet)
Total.....	9,066,272	6,494,909	2,603,363	1,353	324	468	685,019	2,138,368	2,138,368
Region 1.....	2,554,623	1,685,619	869,004	378	23	32	124,500	17,200	17,200
Connecticut.....	167,136	134,774	32,362	15	3	1	5,500	2,000	2,000
Maine.....				5					
Massachusetts.....	249,898	124,619	125,279	32	4	5	26,600	2,000	2,000
New Hampshire.....	505,795	317,068	188,727	77		3	23,700	6,000	6,000
New Jersey.....	1,527,080	1,045,737	481,343	233	16	15	57,700	21,500	21,500
New York.....	81,443	40,180	41,263	13			2,500	1,000	1,000
Rhode Island.....	23,271	23,271		3		8	8,500	1,000	1,000
Vermont.....									
Region 2.....	2,431,246	1,788,784	642,462	361	121	223	224,730	21,700	21,700
Delaware.....	221,136	221,136		32	18	13	19,300	2,000	2,000
District of Columbia.....									
Kentucky.....	66,223	41,049	25,179	10	1		7,700	2,000	2,000
Maryland.....	27,382	27,382		3	17	100	16,500	2,000	2,000
Ohio.....	502,444	290,653	211,791	72	10	6	31,900	2,000	2,000
Pennsylvania.....	1,489,036	1,111,523	377,513	228	69	99	126,720	20,000	20,000
Virginia.....	125,020	97,041	27,979	15	6	5	22,600	14,200	14,200
West Virginia.....				1					
Region 3.....	499,812	417,291	72,521	71	5	1	42,100	12,200	12,200
Alabama.....	113,079	97,145	15,934	20			3,300	2,000	2,000
Florida.....	1,322	1,322					2,200	2,000	2,000
Georgia.....	151,870	151,870		19	3		19,100	2,000	2,000
Mississippi.....									
North Carolina.....	12,402	12,402				1	5,700	2,000	2,000
South Carolina.....							1,000	1,000	1,000
Tennessee.....	211,079	154,492	56,587	32	2		10,800	20,000	20,000
Region 4.....	1,353,919	928,190	424,780	206	23	62	52,110	20,000	20,000
Illinois.....	739,375	565,153	174,222	120	11	10	21,700	2,000	2,000
Indiana.....	181,078	126,442	54,636	28	2	5	6,100	14,000	14,000
Michigan.....	968,662	108,762	159,906	30	4	34	14,400	22,000	22,000
Missouri.....	206,141	129,772	76,369	20	0	2	9,800	22,000	22,000
Wisconsin.....	8,257	8,257		2		1	500	2,000	2,000

See footnote at end of table

FIRE SERVICE—Continued

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)			Selected items approved for procurement (units)					
	Total	1953	1952	Pump-ers	Port-able gener-ators	Port-able pumps	1½ inch hose (feet)	2½ inch hose (feet)	2½ inch hose (feet)
Region 5.....	343,367	287,390	55,977	46	12	23	44,094	128,988	128,988
Arkansas.....	11,698	11,698		1	1		3,000	10,000	10,000
Louisiana.....	181,244	125,267	55,977	24	4	12	15,300	43,800	43,800
New Mexico.....	49,849	49,849		4	4	6	14,499	42,388	42,388
Oklahoma.....	100,576	100,576		17	3	5	11,250	32,800	32,800
Texas.....									
Region 6.....	196,802	130,658	66,144	20	4	97	38,250	85,455	85,455
Colorado.....	23,398	6,633	16,765	4			2,900	6,900	6,900
Iowa.....	17,806	17,806		4			3,500	7,000	7,000
Kansas.....	66,330	59,871	6,459	8	4	52	27,300	39,805	39,805
Minnesota.....	89,268	46,348	42,920	2		43	20,000	20,000	20,000
Nebraska.....				1		2	4,150	9,550	9,550
North Dakota.....				1			400	2,200	2,200
South Dakota.....									
Wyoming.....									
Region 7.....	1,477,459	1,107,873	369,586	219	136	40	145,450	354,450	354,450
Arizona.....	3,571	3,571					1,400	4,150	4,150
California.....	1,234,607	922,676	311,931	189	128	17	107,600	272,600	272,600
Idaho.....									
Montana.....	11,567	11,567				10	3,000	2,800	2,800
Nevada.....									
Oregon.....	87,705	65,626	22,079	10	6	4	21,500	25,900	25,900
Utah.....	4,832	4,832		1	2	6	1,700	4,600	4,600
Washington.....	135,177	99,601	35,576	19		3	10,250	40,400	40,400
Territories and possessions.....	251,044	148,135	102,909	52			13,800	39,800	39,800
Alaska.....	141,278	38,369	102,909	30			1,400	4,800	4,800
American Samoa.....									
Canal Zone.....									
Hawaii.....	10,579	10,579		1			400	2,000	2,000
Puerto Rico.....	99,187	99,187		21			12,000	33,000	33,000
Virgin Islands.....									

¹ The fire service program was in effect only in fiscal years 1952 and 1953.

HEALTH AND SPECIAL WEAPONS DEFENSE

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)				
	Total	1956/57	1955/56	1954	1953 and 1952
Total.....	14,901,883	533,571	1,872,493	877,333	11,618,486
Region 1.....	7,451,941	400,957	1,411,594	367,602	5,262,788
Connecticut.....	383,042	3,941	7,349	53,810	318,042
Maine.....	98,092	1,999	10,906	5,440	20,218
Massachusetts.....	809,313	2,005	19,223	4,440	782,738
New Hampshire.....	26,460	3,218	3,082	6,639	15,530
New Jersey.....	444,942	1,212	16,529	54,946	372,455
New York.....	5,782,830	366,465	1,353,949	236,321	3,745,485
Rhode Island.....	16,048	224		5,261	10,320
Vermont.....	633		663		
Region 2.....	3,307,144	111,044	424,087	104,560	2,352,012
Delaware.....	126,845	61,215	7,791	8,361	49,478
District of Columbia.....	100,680		1,467		99,213
Kentucky.....	15,820		750		15,070
Louisiana.....	89,801	16,088	40,760	15,981	413,002

HEALTH AND SPECIAL WEAPONS DEFENSE

Region and State	Selected items approved for procurement								
	Casualty care		Blood			Chemical warfare defense	Radiological defense		
	First aid station systems	200-bed emergency hospitals	Recipient sets	Plasma	Expanders	Gas masks	Dosimeters	Survey meters	
Total	6,712	107	2,612,810	313,510	241,648	19,627	7,628	9,572	
Region 1	2,273	37	1,566,667	207,792	166,755	10,411	1,690	848	
Connecticut	222	10	10,045	5		7,047	299	153	
Maine	12	1		2,700		1,000	179	97	
Massachusetts	413	7	333,888		11,450	35	183	121	
New Hampshire	10				320	22	40	22	
New Jersey	144	1	22,734	5,036	22,765	1,404	816	177	
New York	1,451	18	1,200,000	200,000	132,540		153	224	
Rhode Island	21			51		100	5	34	
Vermont						5	20	10	
Region 2	2,351	34	383,793	79,059	39,588	6,667	2,501	5,961	
Delaware	53		5,179	125		134	322	268	
District of Columbia	40		8,000	1,400	7,500			62	
Kentucky			6,536	306				5	
Maryland	171	20	15,125	250	14,826	50	87	90	
Ohio	337	14	47,243	26,558	15,822	5,750	253	4,093	
Pennsylvania	1,655		301,410	50,235	250	511	1,623	1,373	
Virginia	75			185	1,200	242	216	80	
West Virginia	20							10	
Region 3	286	1	10,264		400	1,090	23	115	
Alabama							7	11	
Florida	4		72			50	8	23	
Georgia	1					40	8	61	
Mississippi		1	192						
North Carolina	60		9,000						
South Carolina					400				
Tennessee	221		1,000			1,000		20	
Region 4	519	6	105,186	14,647	2,468	16	980	205	
Illinois	6		100	676		10	127	105	
Indiana	181		11,000				11	25	
Michigan	217		94,063	13,825		6	59	19	
Missouri	5		10	144	300				
Wisconsin	110	6	13	2	2,268			56	
Region 5	75				15	2	138	126	
Arkansas							2	10	
Louisiana							132	70	
New Mexico									
Oklahoma	35				15				
Texas						2	4	48	
Region 6	157	3	4,000	84	4,500	950	364	458	
Colorado	26		500					6	
Iowa									
Kansas	92	3	3,000		300	360	15	27	
Minnesota	39		500	84	4,200	600	138	247	
Nebraska	3								
North Dakota	2						8	8	
South Dakota							25	20	
Wyoming						50	178	150	
Region 7	628	26	497,864	4,678	1,592	321	1,812	1,626	
Arizona						26			
California	586	25	378,000			150	384	290	
Idaho									
Montana									
Nevada								15	
Oregon	48		38,050	4,544	1,592		6	60	
Utah				34				1	
Washington	162	6	74,714			135	1,422	584	

HEALTH AND SPECIAL WEAPONS DEFENSE—Continued

Region and State	Selected items approved for procurement							
	Casualty care		Blood			Chemical warfare defense	Radiological defense	
	First aid systems	200-bed emergency hospitals	Recipient sets	Plasma	Expanders	Gas masks	Dosimeters	Survey meters
Territories and possessions...	168		45,036	7,350	26,330	130	120	214
Alaska.....	30		12,000	2,000	2,400		20	13
American Samoa.....								
Canal Zone.....	4							
Guam.....	1							
Hawaii.....	100		6,036	850	23,930	150	100	105
Puerto Rico.....	33		27,000	4,500				20
Virgin Islands.....								

POLICE SERVICES

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)			Selected items approved for procurement (units)			
	Total	1956/57	1955/56	Badges	Holsters	Revolvers	Raincoats
Total.....	109,378	75,225	34,153	3,688	667	569	3,051
Region 1.....	22,327	22,327		864	54	58	753
Connecticut.....	5,325	5,325		64	25	25	179
Maine.....	3,272	3,272		600	9	9	400
Massachusetts.....	4,079	4,079		200	15	19	173
New Hampshire.....	1,865	1,865				5	50
New Jersey.....	7,654	7,654					
New York.....							
Rhode Island.....	132	132					
Vermont.....							
Region 2.....	56,605	23,604	33,001	1,745	461	400	2,143
Delaware.....	9,588		9,588				1,000
District of Columbia.....							
Kentucky.....							
Maryland.....	815	815				4	90
Ohio.....	5,562	5,562		63	461	396	953
Pennsylvania.....	38,177	14,764	23,413	1,682			100
Virginia.....	2,463	2,463					
West Virginia.....							
Region 3.....	2,676	2,107	569	495	50	50	
Alabama.....	1,227	1,227			50	50	
Florida.....	662	662		195			
Georgia.....							
Mississippi.....							
North Carolina.....							
South Carolina.....							
Tennessee.....	787	218	569	300			
Region 4.....	22,687	22,349	338	272	10	10	83
Illinois.....	279	135	144	76			20
Indiana.....	755	561	194	38			20
Michigan.....	165	165					
Missouri.....	1,348	1,348		108	10	10	25
Wisconsin.....	20,140	20,140					

POLICE SERVICES—Continued

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)			Selected items approved for procurement (units)			
	Total	1956/57	1955/56	Badges	Holsters	Revolvers	Raincoats
Region 5.....							
Arkansas.....							
Louisiana.....							
New Mexico.....							
Oklahoma.....							
Texas.....							
Region 6.....	871	871		50		14	
Colorado.....							
Iowa.....							
Kansas.....							
Minnesota.....	871	871		50		14	
Nebraska.....							
North Dakota.....							
South Dakota.....							
Wyoming.....							
Region 7.....	4,212	3,967	245	262	92	37	30
Arizona.....							
California.....	3,109	2,864	245	262	92	37	30
Idaho.....							
Montana.....							
Nevada.....							
Oregon.....	1,103	1,103					
Utah.....							
Washington.....							
Territories and possessions.....							
Alaska.....							
American Samoa.....							
Canal Zone.....							
Guam.....							
Hawaii.....							
Puerto Rico.....							
Virgin Islands.....							

PUBLIC CD INFORMATION AND EDUCATION

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)				
	Total	1956/57	1955/56	1954	1953
Total.....	729,057	119,005	267,596		342,456
Region 1.....	272,711	64,346	78,121		130,244
Connecticut.....	7,967	1,538	3,396		3,043
Maine.....	15,431	4,084	11,347		5,346
Massachusetts.....	38,507	29,050	4,111		
New Hampshire.....					
New Jersey.....	23,411	1,245	3,830		18,336
New York.....	184,943	27,512	54,677		102,754
Rhode Island.....					987
Vermont.....	2,070	897	790		383
Region 2.....	237,124	30,031	91,835		115,258
Delaware.....	4,505	963	3,542		
District of Columbia.....	19,855		19,855		
Kentucky.....	1,043		1,367		666
Maryland.....	21,703	7,474	2,400		10,819
Ohio.....	101,034	2,103	25,081		74,150
Pennsylvania.....	71,031	17,086	30,786		23,149
Virginia.....	15,626	2,194	6,991		6,441
West Virginia.....	447		113		334

PUBLIC CD INFORMATION AND EDUCATION—Continued

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)				
	Total	1956/57	1955/56	1954	1953
Region 3.....	62,086	3,729	25,104		33,253
Alabama.....	7,263	615	4,679		1,969
Florida.....	5,724	600	2,698		2,426
Georgia.....	43,553	2,514	13,704		27,335
Mississippi.....	736		285		451
North Carolina.....	618		462		156
South Carolina.....	50				50
Tennessee.....	5,842		3,276		2,566
Region 4.....	58,301	3,922	38,209		16,170
Illinois.....	7,414	365	7,049		4,207
Indiana.....	9,487	1,126	4,154		5,799
Michigan.....	19,266	2,273	11,203		5,790
Missouri.....	12,821	158	9,125		3,538
Wisconsin.....	9,313		6,678		2,635
Region 5.....	28,816	2,342	12,027		14,447
Arkansas.....	199		199		
Louisiana.....	12,308	1,877	8,236		2,195
New Mexico.....					
Oklahoma.....	181				151
Texas.....	16,128	465	3,592		12,071
Region 6.....	19,776	1,109	15,665		3,002
Colorado.....	11,732	150	10,260		1,322
Iowa.....					
Kansas.....	3,871		3,825		4
Minnesota.....	3,329	268	1,474		1,597
Nebraska.....	797	691	106		
North Dakota.....					
South Dakota.....					
Wyoming.....	47				47
Region 7.....	38,169	13,381			24,788
Arizona.....	199				199
California.....	29,911	11,585			18,326
Idaho.....					
Montana.....					
Nevada.....	43				43
Oregon.....	4,523	735			3,788
Utah.....	1,704				1,704
Washington.....	1,789	1,061			728
Territories and possessions.....	12,074	145	6,635		5,294
Alaska.....	2,198		1,337		961
American Samoa.....					
Canal Zone.....					
Guam.....					
Hawaii.....	4,578	145			4,433
Puerto Rico.....	5,298		5,298		
Virgin Islands.....					

Included under training and education in 1952 and 1954.

RESCUE SERVICE

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)					Selected items approved for procurement (units)			
	Total	1956/57	1955/56	1954	1953 and 1952	Basic rescue kits	Trucks and trailers with tools	Trucks and trailers without tools	Sets of tools
Total.....	2,390,861	145,748	592,124	555,028	1,097,961	27	427	171	384
Region 1.....	759,849	61,702	181,785	169,967	346,395		91	73	142
Connecticut.....	60,240	9,707	11,557	16,673	22,303		10	5	4
Maine.....	29,011		13,750	315	14,946		11		
Massachusetts.....	151,845	31,386	28,255	20,389	71,815		9	14	20
New Hampshire.....	4,279		520	3,654	106				
New Jersey.....	122,626		54,235	26,922	41,369		28	4	5
New York.....	365,373	17,880	63,875	92,334	191,284		27	50	112
Rhode Island.....	18,637		5,010	9,084	4,543		5		
Vermont.....	7,838	2,729	4,583	526					
Region 2.....	698,398	58,565	245,116	117,142	278,575	13	120	57	90
Delaware.....	37,581	115	19,887	3,826	13,753		11		
District of Columbia.....	4,696				4,696			2	3
Kentucky.....	85,017	18,572	37,634	15,537	17,974	4	21	1	20
Maryland.....	196,184		30,843	44,718	123,623		37	16	21
Ohio.....	290,770	26,163	128,849	31,151	104,607	5	38	37	43
Pennsylvania.....	78,717	18,415	27,903	18,477	13,922	4	12	1	2
Virginia.....	3,433		8,433				1		
West Virginia.....									
Region 3.....	107,900	5,313	23,282	25,019	49,286		30	3	3
Alabama.....	9,366		9,366				1	1	1
Florida.....	41,992			7,650	34,342		10	1	
Georgia.....	18,971		9,000	8,839	1,132		5		
Mississippi.....	21,088	5,313	6,812	4,132	4,831		4		1
North Carolina.....								1	
South Carolina.....	16,483		3,104	4,398	8,081		10		1
Tennessee.....									
Region 4.....	196,731	6,156	43,449	119,185	27,941	3	34	8	15
Illinois.....	70,405	5,750	2,828	50,222	11,805		8		
Indiana.....	18,466	193	14,850	1,423			5		
Michigan.....	56,944	213	6,771	44,130	5,830	2	15	8	9
Minnesota.....	19,954		1,993	7,655	10,306		1		6
Missouri.....	32,962		17,207	15,755		1	5		
Wisconsin.....									
Region 5.....	113,627	7,032	29,140	29,351	48,104	2	24	2	3
Arkansas.....	10,512	2,006	2,358	5,948		2	2		
Louisiana.....	27,305	5,026	8,925	12,908			8	1	
New Mexico.....	7,583		6,892	691			1		
Oklahoma.....	68,227		10,765	10,104	47,338		13	1	3
Texas.....									
Region 6.....	130,601	4,076	14,932	10,066	101,527		27	9	37
Colorado.....									
Iowa.....	9,617				9,617		1		
Kansas.....	536		680				5		
Minnesota.....	120,238	4,076	14,246	10,056	91,910		20	9	37
Nebraska.....									
North Dakota.....									
South Dakota.....									
Wyoming.....									
Region 7.....	373,633	2,904	44,470	84,208	242,161	9	93	19	94
Arizona.....	8,430		7,132	66,339	968				
California.....	261,594	2,567	3,760	66,162	189,125	4	62	17	88
Idaho.....									
Montana.....									
Nevada.....	63,457	347	32,680	16,973	13,447		12	1	1
Oregon.....	448		558						
Utah.....	39,445			324	38,621		15		
Washington.....									

*Purchased under training and education program.

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RESCUE SERVICE—Continued

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)					Selected items approved for procurement (units)			
	Total	1956/57	1955/56	1954	1953 and 1952	Basic rescue kits	Trucks and trailers with tools	Trucks and trailers without tools	Set of tools
Territories and possessions	8,922		4,950		3,972		8		
Alaska	583				583				
American Samoa							2		
Canal Zone									
Guam	3,389				3,389				
Hawaii	4,950		4,950				2		
Puerto Rico							4		
Virgin Islands									

TRAINING AND EDUCATION

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)					Selected items approved	
	Total	1956/57	1955/56	1954	1953 and 1952	Courses given	Persons trained
Total	6,184,093	413,992	693,129	573,494	4,503,478	755	73,932
Region 1	1,880,128	227,184	142,664	122,824	1,387,436	49	14,533
Connecticut	104,909	9,752	28,679	4,111	62,367	18	506
Maine	35,538	5,442	3,837	1,376	25,063	8	236
Massachusetts	189,869	13,515	30,264	5,147	140,943		
New Hampshire	21,102	3,871	1,591	1,776	14,064		
New Jersey	176,769	13,960	38,620	23,818	100,371	2	150
New York	1,320,788	177,440	36,568	85,595	1,021,185	21	13,333
Rhode Island	14,384	356	427	376	13,255		
Vermont	16,769	3,048	2,898	625	10,196		
Region 2	1,102,540	75,992	173,847	76,688	776,013	439	30,820
Delaware	47,378	2,379	13,699	383	30,917	4	3,365
District of Columbia	13,042		275		12,767		
Kentucky	162,459	4,401	6,488	1,506	150,064	66	1,225
Maryland	396,695	15,244	43,665	38,972	298,814	321	18,107
Pennsylvania	407,379	49,214	104,735	30,663	222,707	48	8,103
Virginia	73,797	4,754	4,925	4,592	59,526		
West Virginia	1,549			572	977		
Region 3	336,777	13,613	99,775	73,208	150,181	48	2,740
Alabama	102,930	594	25,790	39,414	37,132		
Florida	74,583	8,656	39,022	2,059	24,846	48	2,740
Georgia	61,382	2,469	25,574	22,406	10,933		
Mississippi	2,500		2,010		490		
North Carolina	5,336		72	3,826	1,438		
South Carolina	9,043				9,043		
Tennessee	80,653	1,894	7,307	5,503	66,249		
Region 4	445,920	10,467	35,615	71,064	328,774	38	10,157
Illinois	47,896	1,821	5,808	18,969	21,598	15	614
Indiana	56,367	718	7,758	925	46,066		
Michigan	217,203	3,789	10,352	5,977	194,375	3	416
Missouri	50,180	3,564	3,638	21,355	21,883	6	1,882
Wisconsin	74,104	605	8,709	20,838	43,952	6	4,345
Region 5	267,529	60,311	75,937	49,877	81,404	76	2,456
Arkansas	12,257	2,420	9,078		764		
California	54,522	5,517	5,540	4,550	40,915		
New Mexico							
Oklahoma	118,560	41,909	48,352	25,390	2,900	24	1,363
Texas	72,649	7,335	9,572	21,623	34,119	52	2,063

TRAINING AND EDUCATION—Continued

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)					Selected items approved	
	Total	1956/57	1955/56	1954	1953 and 1952	Courses given	Persons trained
Region 6	297,161	12,148	10,720	24,659	249,634	25	2,583
Colorado	33,849		609	1,917	31,323		
Iowa	15,054			501	14,553		
Kansas	100,476	485	2,746	11,186	86,059		
Minnesota	79,596	1,204	4,344	7,576	66,472	17	1,793
Nebraska	42,157	10,091	2,361	3,251	26,454	1	40
North Dakota	20,738		255		20,503		
South Dakota	780				780		
Wyoming	4,491	113	660	228	3,490	7	750
Region 7	1,686,479	13,669	151,807	150,517	1,370,486	79	9,581
Arizona	29,711		4,741	2,426	22,544		
California	1,888,253	12,125	92,835	110,748	1,172,545	75	9,191
Idaho	386		100	286			
Montana	1,492		101	212	1,079		
Nevada	17,617				17,617		
Oregon	87,225		20,965	13,785	52,475		
Utah	28,686	462	2,482	3,438	22,304	3	90
Washington	133,109	881	30,676	19,622	81,930	1	300
Territories and possessions	167,569	606	2,744	4,657	159,559	1	60
Alaska	28,478		132	3,421	24,925		
American Samoa							
Canal Zone	77			77			
Guam	6,343		559		5,784		
Hawaii	58,038		1,638	831	55,569		
Puerto Rico	73,161	142	328	328	72,991		
Virgin Islands	1,462	466	415		581	1	60

WELFARE SERVICE

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)					Selected items approved for procurement (units)			
	Total	1956/57	1955/56	1954	1953 and 1952	Blankets	Food and liquid carriers	Portable stoves and burners	Stock pots
Total	290,018	43,190	82,776	101,692	62,360	24,217	235	503	262
Region 1	116,013	24,128	50,156	35,968	5,761	4,030	71	273	46
Connecticut	1,978	609	872	497			4	4	4
Maine	18,296		5,362	7,684	5,252	3,500	20	251	20
Massachusetts	14,807	10,800	1,125	2,882			20	5	12
New Hampshire	899			909			30	5	4
New Jersey	34,389		16,090	18,290			300	18	5
New York	35,628	12,719	16,594	6,315			2	9	1
Rhode Island	10,104		10,104				200	2	
Vermont									
Region 2	107,376	16,494	22,233	54,015	14,634	12,412	48	214	290
Delaware	1,900		1,900			600	12		
District of Columbia									
Kentucky									
Maryland	48,465	222	5,125	43,116		490	4		2
Ohio	49,190	15,272	11,566	3,693	12,857	13,900	49	200	168
Pennsylvania	6,550		2,373	2,204	1,977	612	14	14	90
Virginia	1,204		1,204						
West Virginia									

WELFARE SERVICE—Continued

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)					Selected items approved for procurement (units)			
	Total	1956/57	1955/56	1954	1953 and 1952	Blankets	Food and liquid carriers	Portable stoves and burners	Stock pots
Region 3.....	841		841						
Alabama.....									
Florida.....									
Georgia.....	641		641						
Mississippi.....									
North Carolina.....	200		200						
South Carolina.....									
Tennessee.....									
Region 4.....	23,995	1,868	5,317	299	16,511	3,075	100		
Illinois.....	324		324						
Indiana.....	16,891		380		16,511	3,075			
Michigan.....	4,411		4,250	161			100		
Missouri.....	138			138					
Wisconsin.....	2,231	1,868	363						
Region 5.....									
Arkansas.....									
Louisiana.....									
New Mexico.....									
Oklahoma.....									
Texas.....									
Region 6.....	826		420	406		200			
Colorado.....	826		420	406		200			
Iowa.....									
Kansas.....									
Minnesota.....									
Nebraska.....									
North Dakota.....									
South Dakota.....									
Wyoming.....									
Region 7.....	40,967	700	3,809	11,004	25,454	4,500	16	16	16
Arizona.....									
California.....	1,432			1,432					
Idaho.....									
Montana.....									
Nevada.....									
Oregon.....	12,204	700	1,932	9,572					
Utah.....									
Washington.....	27,331		1,877		25,454	4,500	16	16	16
Territories and possessions.....									
Alaska.....									
American Samoa.....									
Canal Zone.....									
Guam.....									
Hawaii.....									
Puerto Rico.....									
Virgin Islands.....									

OTHER SERVICES

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)				
	Total	1956/57 ¹	1955/56 ¹	1954 ¹	1953 ¹
Total.....	179,165	20,451	11,191	6,379	141,144
Region 1.....	66,236	451	7,574		58,211
Connecticut.....					
Maine.....					
Massachusetts.....					
New Hampshire.....					
New Jersey.....	1,000		1,000		
New York.....					
Rhode Island.....	58,211				58,211
Vermont.....					
Region 2.....	24,013				24,013
Delaware.....					
District of Columbia.....					
Kentucky.....					
Maryland.....					
Ohio.....	24,013				24,013
Pennsylvania.....					
Virginia.....					
West Virginia.....					
Region 3.....	1,750		1,750		
Alabama.....					
Florida.....					
Georgia.....	1,750		1,750		
Mississippi.....					
North Carolina.....					
South Carolina.....					
Tennessee.....					
Region 4.....	26,279			6,379	19,900
Illinois.....					
Indiana.....					
Michigan.....	11,967				11,967
Missouri.....	14,312			6,379	7,933
Wisconsin.....					
Region 5.....	118		118		
Arkansas.....					
Louisiana.....	118		118		
New Mexico.....					
Oklahoma.....					
Texas.....					
Region 6.....	1,892		1,402		490
Colorado.....	1,402		1,402		
Iowa.....					
Kansas.....	490				490
Minnesota.....					
Nebraska.....					
North Dakota.....					
South Dakota.....					
Wyoming.....					
Region 7.....	58,877	20,000	347		38,530
Arizona.....	121				121
California.....	58,037	20,000			38,037
Idaho.....					
Montana.....					
Nevada.....					
Oregon.....					
Utah.....	121		347		174
Washington.....	198				198
Territories and possessions.....					
Alaska.....					
American Samoa.....					
Canal Zone.....					
Guam.....					
Hawaii.....					
Puerto Rico.....					
Virgin Islands.....					

STATE CIVIL DEFENSE COUNCILS AND ADVISORY COMMITTEES

There are several national groups which help to shape civil defense planning and policy, such as:

(1) The National Civil Defense Advisory Council appointed by the President in accordance with Public Law 920, 81st Congress.

(2) The Civil Defense Coordinating Board created by Executive Order 10,611 in May 1955, with representatives from 17 major Federal agencies to assist in developing a civil defense plan for all Federal departments and agencies.

(3) The Civil Defense Scientific Advisory Committee created in 1954 under authority of section 102 (b), Public Law 920, 81st Congress, to assist FCDA in major scientific problems affecting civil defense.

(4) The National Advisory Council for Rural Civil Defense established in December 1955 by the FCDA Administrator.

Just as Civil Defense Advisory Councils and Committees are needed at the national level, so the need for such groups has been recognized by the States. All except eight States have a Civil Defense Council or Advisory Committee, or both. They are by States:

STATE CIVIL DEFENSE COUNCILS AND ADVISORY COMMITTEES

Region and State	States having a civil defense council or advisory committee	Type		Region and State	States having a civil defense council or advisory committee	Type	
		Council	Committee			Council	Committee
Region 1:				Region 4:			
Connecticut.....	X	X		Illinois.....	X	(1)	(1)
Maine.....	X	X		Indiana.....	X	(1)	(1)
Massachusetts.....	X	X		Michigan.....	X	(1)	(1)
New Hampshire.....	X	X		Missouri.....	X	(1)	(1)
New Jersey.....	X	X		Wisconsin.....	X	(1)	(1)
New York.....	X	X					
Rhode Island.....	X	X		Region 5:			
Vermont.....	X	X		Arkansas.....	X	X	
Region 2:				Louisiana.....	X	X	
Delaware.....	X	X		New Mexico.....	X	X	
District of Columbia.....	X	X		Oklahoma.....	X	X	
Kentucky.....	X	X		Texas.....	X	X	
Maryland.....	X	X		Region 6:			
Ohio.....	X	X		Colorado.....	X	(1)	(1)
Pennsylvania.....	X	X		Iowa.....	X	(1)	(1)
Virginia.....	X	X		Kansas.....	X	(1)	(1)
West Virginia.....	X	X		Minnesota.....	X	X	
Region 3:				Nebraska.....	X	X	
Alabama.....	X	(1)	(1)	North Dakota.....	X	X	
Florida.....	X	(1)	(1)	South Dakota.....	X	X	
Georgia.....	X	(1)	(1)	Wyoming.....	X	X	
Mississippi.....	X	(1)	(1)	Region 7:			
North Carolina.....	X	(1)	(1)	Arizona.....	X	(1)	(1)
South Carolina.....	X	(1)	(1)	California.....	X	(1)	(1)
Tennessee.....	X	(1)	(1)	Idaho.....	X	(1)	(1)
				Montana.....	X	(1)	(1)
				Nevada.....	X	(1)	(1)
				Oregon.....	X	(1)	(1)
				Utah.....	X	(1)	(1)
				Washington.....	X	(1)	(1)

1 Citizens. 2 Executive. 3 Not reported. 4 Governor's cabinet. 5 State development commission.

CIVIL DEFENSE PERSONNEL

The tables that follow show summaries of the number of persons currently enrolled in civil defense as reported by the District of Columbia and 42 of the 48 States. The figures include those persons who are actively enrolled in civil defense and who have been notified of their civil defense assignments—paid or volunteer, full or part-time personnel. FCDA has been unable to obtain data on this subject from six States.

The tables reflect personnel status as of June 30, 1956, but due to differences in reporting systems, the figures for seven States cover a period ranging from December 31, 1955, to August 1956. The figures from many States represent their best available estimates rather than actual counts. They should therefore be used as estimates only and with some caution.

NUMBER OF PERSONS ENROLLED IN CIVIL DEFENSE By State

Region and State	Number of persons enrolled	Region and State	Number of persons enrolled
Total.....	1 (4, 471, 073)	Region 5.....	383, 659
Region 1.....	1 (1, 446, 153)	Arkansas.....	45, 707
Connecticut.....	89, 065	Louisiana.....	94, 906
Maine.....	72, 960	New Mexico.....	12, 732
Massachusetts.....	195, 105	Oklahoma.....	87, 055
New Hampshire.....	26, 386	Texas.....	145, 269
New Jersey.....	267, 620	Region 6.....	350, 533
New York.....	756, 088	Colorado.....	53, 514
Rhode Island.....	36, 929	Iowa.....	49, 086
Vermont.....	NR	Kansas.....	44, 950
Region 2.....	908, 038	Minnesota.....	70, 551
Delaware.....	7, 707	Nebraska.....	53, 896
District of Columbia.....	57, 241	North Dakota.....	22, 406
Kentucky.....	15, 969	South Dakota.....	43, 826
Maryland.....	55, 715	Wyoming.....	12, 215
Ohio.....	202, 059	Region 7.....	1 (702, 537)
Pennsylvania.....	465, 940	Arizona.....	NR
Virginia.....	55, 129	California.....	494, 108
West Virginia.....	48, 278	Idaho.....	NR
Region 3.....	593, 060	Montana.....	23, 589
Alabama.....	21, 491	Nevada.....	7, 197
Florida.....	73, 282	Oregon.....	41, 588
Georgia.....	55, 431	Utah.....	14, 918
Mississippi.....	12, 217	Washington.....	121, 077
North Carolina.....	85, 987		
South Carolina.....	14, 128		
Tennessee.....	60, 520		
Region 4.....	1 (357, 097)		
Illinois.....	259, 815		
Indiana.....	97, 282		
Michigan.....	NR		
Missouri.....	NR		
Wisconsin.....	NR		

1 Incomplete.

NUMBER OF PERSONS ENROLLED IN CIVIL DEFENSE

By Program

Service or program	Number of persons enrolled	Service or program	Number of persons enrolled
Total	14,471,073	Police—regular and auxiliary	429,205
Administrative and staff—executive, services, clerical	79,608	Public information—officers and staff	5,383
Communications and warning—control center personnel, radio operators, etc.	181,851	Radiological defense	22,818
Emergency welfare—registration, feeding, etc.	379,890	Rescue—light and heavy duty, industrial, etc.	105,434
Engineering—facilities, traffic, etc.	385,530	Supply	22,339
Fire—regular, volunteer, auxiliary	563,720	Training and education—including training officers, but NOT including those counted in other services listed above or below	36,620
Ground observer corps	433,134	Transportation	473,653
Health and medical—including first aid trainees	772,828	Warden	392,652
		Other	176,418

¹ This total is for the District of Columbia and 42 of the 48 States.

INTERSTATE CIVIL DEFENSE AND DISASTER COMPACTS

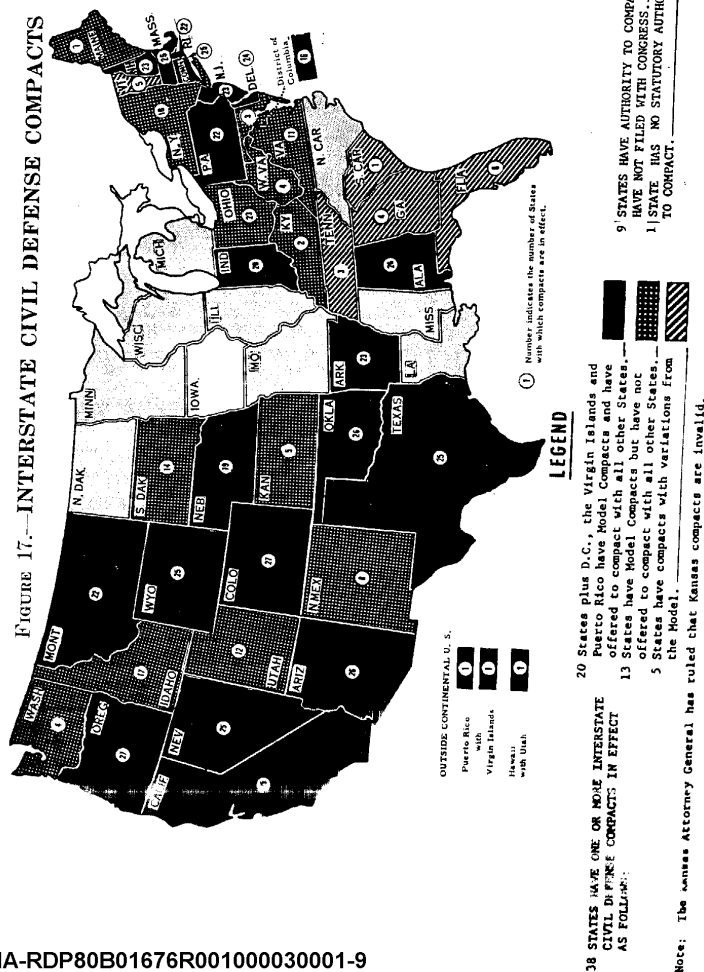
The Federal Civil Defense Act of 1950, as amended (subsec. 201 (g)), authorizes the Administrator to encourage, and to assist in, the negotiation of civil defense compacts between States and to review the terms and conditions to obtain uniformity in them and consistency with national civil defense plans and programs, where feasible. The Administrator is also authorized to assist and coordinate activities under such compacts. The act establishes congressional procedure for the granting of the consent of Congress to civil defense compacts.

Such a device as the interstate compact was considered necessary by the Congress to avoid Federal centralization of civil defense operations and at the same time to avoid excessive decentralization which might result if each State could operate in civil defense matters only as a separate entity. The interstate compact provides a broad base of legal authority for joint civil defense action by two or more States.

A model compact which was developed by the Office of Civil Defense of the National Security Resources Board in conjunction with representatives of the Council of State Governments has been followed by the States in executing civil defense agreements. There have been no substantial changes in its terms except in several of the Southeastern States, which have executed compacts which do not contain authority for interstate operations in natural disasters. Vermont is the only other State which deviates from the model in this manner. Some of the Ohio compacts contain a substantial deviation in article 3 in the rights, privileges, and immunities clause. However, all except a few of the Ohio compacts have now been brought into line with the model by amendment of this article.

The compacts authorize supplementary agreements which are effective without being submitted to the Congress.

FIGURE 17.—INTERSTATE CIVIL DEFENSE COMPACTS



ments, either formal or informal, have been entered into between many States under this authority. These agreements set out in detail plans of operations in the fields of the various civil defense services, such as police, medical, welfare, and others.

While considerable progress has been made by the States in effectuating interstate civil defense compacts, there are some areas of the country which have lagged in establishing this authority, as indicated in figure 17. In view of the survival plan program which FCDA has initiated, it is especially important that all States establish the necessary basic legal framework for operating across State boundaries.

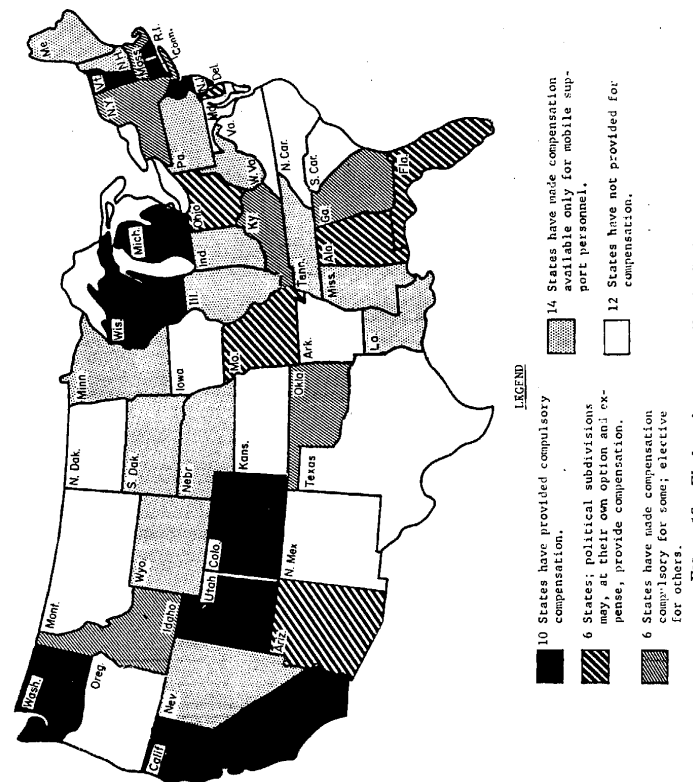
Thirty-eight States and the District of Columbia, Hawaii, the Virgin Islands, and Puerto Rico, have at least one interstate civil defense compact in effect. The compacts of 33 of these States are in the terms of the model; however, 13 of these 33 have not offered to compact with all other States. Ten States do not have civil defense compacts, i. e., Illinois, Iowa, Louisiana, Michigan, Minnesota, Mississippi, Missouri, North Carolina, North Dakota, and Wisconsin. Only one State in this group (Iowa) has no statutory authority to enter into such compacts.

Of the 38 States, 5 (Alabama, Arizona, Colorado, Oklahoma, and Oregon) have compacts with more than 25 other States; 17 have compacts with from 16 to 25 others; 7 have compacts with from 6 to 15 others; 9 have compacts with from 1 to 5 others.

All of the States have not followed the same method of either authorizing or effectuating compacts. Some of the State legislatures have conferred general authority upon the Governor to enter into civil defense compacts with other States; others have authorized the Governor to enter into interstate civil defense compacts in terms set out in a special Compact Act. A majority of the States have followed the procedures for effectuating compacts set out in FCDA Advisory Bulletin No. 32 and Supplement No. 1 thereto. Some have followed different methods of consummation, usually by executing a separate instrument with each State and forwarding a copy of each such instrument to Congress.

WORKMEN'S COMPENSATION FOR CD PERSONNEL

Thirty-six States have adopted legislation providing for compensation to special categories of, or all, civil defense workers who may be injured while in training or on duty or under other specified conditions. In four States (California, New York, Ohio, and Rhode Island) this has been done by amendment to the State Workmen's Compensation Law, while in the remaining States which have enacted this type of legislation it has been done by the State Civil Defense Act or amendments thereto.



In 12 States (California, Colorado, Connecticut, Maine, Massachusetts, Michigan, New Jersey, New York, Ohio, Rhode Island, Washington, and Wisconsin) either compulsory or elective coverage is provided for all types of civil defense workers and for periods while in training, practice, or on duty. The other States have limited coverage to specified civil defense workers, such as members of mobile support units or those rendering aid outside of their own political subdivisions, or police and rescue personnel. In some States coverage is also limited to injuries received during attack or while on actual duty or while performing specified services.

Under most of the provisions the covered volunteer civil defense workers are classified as employees of the State or given the same rights as State employees for purposes of the Workmen's Compensation Law. In some States they are classified as employees of the sponsoring local political subdivision.

In general, benefits under the State Workmen's Compensation Law are applied to civil defense workers who are covered. In California and New York, where coverage for special workers is provided by amendment to Workmen's Compensation Laws, the benefits are less in some respects for these workers than for others. In Massachusetts, where coverage has been included in the State Civil Defense Act, benefits for civil defense workers are greater in some respects than those for regularly covered workers. New Jersey has a special benefit system for civil defense workers.

Civil defense workers who are on a paid basis generally are subject to the same protection for injuries while on duty as other public employees who are on a paid basis. Figure 19 summarizes the main provisions of laws relating to workmen's compensation for civil defense personnel.

AMERICAN NATIONAL RED CROSS COOPERATION

The American National Red Cross participation in the national civil defense program expanded during the year following a series of conferences between officials of FCDA and the Red Cross and an exchange of letters between the Administrator and the president of the Red Cross.

To effect a closer working relationship, the Red Cross created the position of assistant to the president on civil defense affairs in its national headquarters, and arranged for a full time liaison officer at FCDA National Headquarters. In addition, Red Cross representatives for liaison and program planning were detailed to each of FCDA's seven regional offices, some on loan, others continuing in the employ of the Red Cross. FCDA, in turn, added new members to its welfare staff to work with the Red Cross.

State	Compensation Provided by	
	Amendment to Workmen's Compensation Act	State Civil Defense Act
Alabama		
Arizona		
California		
Colorado		a.
Connecticut		
Delaware		
Florida		
Georgia		
Idaho		
Illinois		
Indiana		
Kentucky		
Louisiana		
Maine		
Massachusetts		
Michigan		
Minnesota		
Mississippi		
Missouri		
Nebraska		
Nevada		
New Jersey		a.
New Hampshire		
New York		
Ohio		
Oklahoma		
Pennsylvania		
Rhode Island		
South Dakota		
Tennessee		
Utah		
Vermont		
Washington		
West Virginia		
Wisconsin		
Wyoming		

- By special legislation.
- Compulsory for volunteer unpaid firemen other volunteer unpaid personnel.
- Compulsory for certain civil defense personnel.
- Compulsory for firemen and policemen personnel; no benefits for others.
- Only to the extent as provided for sheriff police.

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Compensation Provided by		Benefits for All State Civil Defense Personnel		Benefits for All Political Subdivision CD Personnel		Benefits for Mobile Support Personnel		Benefits Available While Training	Rehabilitation Aid Provided
Amendment to Workmen's Compensation Act	State Civil Defense Act	Compulsory	Elective	Compulsory	Elective	Compulsory	Elective		
					g.		g.	i.	i.
					g.		g.	i.	i.
	a.								i.
									i.
					g.		g.	i.	i.
					g.		g.	i.	i.
								j.	i.
						l.		j.	i.
								g.	i.
						g.		g.	i.
								k.	i.
									i.
		b.	b.	b.	b.	b.	b.	i.	i.
						i.		i.	i.
						g.		g.	
					g.		g.	i.	i.
	a.					g.		i.	i.
								k.	i.
		c.	c.	c.	c.	c.	c.	c.	c.
		d.						k.	
								d.	i.
									i.
						g.		g.	i.
							g.	g.	i.
	e.			e.		e.		e.	i.
									i.
		f.		f.		f.		i.	i.
									i.

legislation.
 For volunteer unpaid firemen and policemen; elective for peer unpaid personnel.
 For certain civil defense personnel; elective for others.
 For firemen and policemen performing civil defense activities for others.
 extent as provided for sheriffs, constables and local
 personnel acting as employees of a private employer during
 the activities. Benefits are for injuries only, not death

h. Compulsory for State, county and city personnel; elective for town personnel.
 i. No specific provision
 j. Compulsory for mobile support personnel; elective for political subdivision personnel.
 k. Elective.
 l. Compulsory for State personnel; elective for political subdivision personnel.

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In late 1955, FCDA and the Red Cross cooperated in relief work in a number of natural disasters, particularly the floods on the west and east coasts. During these operations both agencies were able to clarify their respective responsibilities and familiarize one another with policies and procedures.

At the request of FCDA, the Red Cross has helped to improve and speed civil defense training in first aid, home nursing, and emergency feeding. During fiscal year 1956 the Red Cross awarded 852,000 first aid certificates and 216,800 home nursing certificates.

During the year the Red Cross began work on a new standard first aid course which will include techniques for the treatment of illness and injury resulting from enemy attack. The new course will be the first aid training course for civil defense workers and the general public, and will be publicized jointly by FCDA and Red Cross.

Recognizing Red Cross experience in training canteen workers, FCDA requested help in preparing an emergency mass feeding course for civil defense uses. FCDA will use this course to train civil defense workers for enemy-caused emergencies; the Red Cross in training volunteers for mass feeding operations in natural disasters. Two pilot courses to test the soundness of course material were scheduled for midsummer.

With the advice and counsel of leaders in nursing, the Red Cross is preparing a new training course on care of the sick and injured for all civil defense auxiliary personnel working in medical care facilities.

Plans assigning to the Red Cross development of a national system for procurement of whole blood were completed by FCDA. In civil defense emergencies the Red Cross will direct the plan, under the supervision of the FCDA health office.

INTERNATIONAL COOPERATION

As one of the elements in the total program of national security, which includes defense alliances with friendly foreign nations, FCDA, under Public Law 920, has the authority to work closely with allied nations in developing civil defense systems.

FCDA is required, with the advice and guidance of the Department of State, to take part in deliberations of international civil defense and security organizations and exchange civil defense information with other free world nations.

A summary of the major activities and developments in civil defense international cooperation during the fiscal year follows.

gency planning, created the Senior Civil Emergency Planning Committee.

The function of this committee is to advise the Council on civil emergency planning, and to provide guidance to all groups engaged in planning. The senior committee held two meetings during fiscal 1956. The meeting held in April 1956 was attended by the FCDA Administrator.

FCDA also serves on an interagency committee which was founded during the year to formulate policies for and provide guidance to the United States delegate to the Senior Civil Emergency Planning Committee. This committee is composed of representatives of the Departments of State and Defense, the International Cooperation Administration, and the Office of Defense Mobilization.

The NATO Civil Defense Committee, created in 1952, and composed of the civil defense directors of the NATO member nations, continued to concern itself during the year with the development of civil defense programs. This included promoting free exchange of civil defense information, developing civil defense agreements between nations, standardizing civil defense equipment and training, and furthering mutual support on an international basis.

This committee also established working groups to study technical problems involved in fire fighting, shelter, scientific matters, warning systems, mobile support columns, and the maintenance of public utilities.

The NATO Civil Defense Committee held two meetings during the year. The Administrator and his special advisor attended the meeting held in November 1955.

At the request of the Department of State, FCDA also sent representatives to a number of meetings of NATO working parties established by the Civil Defense Committee, including the working parties on firefighting, shelters, public utilities (gas, water, and electricity), and the scientific working party.

An FCDA representative will attend all future meetings of the working party on warnings.

In 1954, the North Atlantic Council created a medical committee to plan assessment of casualties, and to study stockpiling of medical material, export and import requirements, and war hospitalization facilities. This committee held two meetings which were attended by representatives of several United States Government agencies, including FCDA.

In view of its direct concern with many of the problems currently being considered by the medical committee, FCDA has been asked by the Department of State to continue its participation in the committee work, and to provide the United States representation for the meeting scheduled in the fall of 1956.

In November 1955, the Senior Civil Defense Advisor for NATO, Sir John Hodsoll, visited the United States to confer with the Department of State on the coordination of NATO civil emergency planning. At the invitation of FCDA, he addressed meetings of the National Association of State Civil Defense Directors and the FCDA National Women's Advisory Committee.

Canada

Joint Canadian and United States civil defense matters are handled through the Joint United States-Canada Civil Defense Committee established on March 27, 1951. It was agreed then that, so far as possible, joint civil defense activities should be coordinated as if there were no border. The committee provides a nondiplomatic channel for communications, and enjoins the respective countries to provide a full and free flow of civil defense information to each other. It also authorizes direct cooperation between States and Provinces, and between border municipalities.

United States members include representatives of the Departments of Justice, State, and Treasury, in addition to the Federal Civil Defense Administrator and members of his staff. Canadian representatives are the Minister of the National Department of Health and Welfare, and his deputy, the Federal Coordinator, and officials of the Department of External Affairs, and the Canadian Joint Staff.

Day-to-day business of the committee is conducted through the joint secretariat and joint working groups set up to handle specific technical and professional problems.

Operating agreements have been made on most essential matters, and the current business of the committee is primarily coordination and consultation on problems of civil defense and their solution.

The full committee met in July 1955. The next meeting was set for October 18-19, 1956.

Canadian and United States civil defense staff colleges exchanged students and course material during the year. Conferences on a wide variety of subjects were attended by representatives from each country. Technical and professional papers of each country were submitted, when possible, for review by the staff of the other country, before publication.

Arrangements were completed for the loan of a 200-bed civil defense emergency hospital unit to Canada for training in casualty care. Other arrangements were made to make available to Canada certain items of chemical and biological warfare defense for study.

Cooperation With Other Friendly Nations

During the fiscal year, FCDA broadened its program of exchanging information on civil defense with other friendly nations. FCDA's Staff College training facilities were made available to civil defense officers from other countries, including China (Formosa), Canada, Chile, Denmark, Egypt, Pakistan, Sweden, and Venezuela.

Basic information on the FCDA civil defense organization, unclassified results of the atomic test program, and many FCDA films and publications were furnished upon request to: Australia, Belgium, Brazil, Canada, Chile, Denmark, Egypt, Ecuador, France, (West) Germany, Great Britain, Honduras, India, Iran, Ireland, Italy, Japan, Lebanon, Malta, The Netherlands, Norway, Pakistan, Peru, the Philippines, Portugal, South Africa, Spain, Sweden, Switzerland, Uruguay, and Venezuela.

FCDA also established a program with friendly nations to exchange civil defense equipment for comparative testing.

The FCDA staff provided technical help and guidance to the civil defense director of Pakistan in preparing his country's national civil defense plan.

FCDA arranged for the civil defense directors of Denmark and Bombay, India, to visit several States and cities to study State and local civil defense organizations and operations.

During the year, the Commandant of the Australian Civil Defense School, the Civil Defense Director of the Australian State of New South Wales, a member of the Civil Defense Advisory Commission of Chile, the Civil Defense Directors of Denmark and Bombay, India, representatives of the Governments of China (Formosa), Egypt, Great Britain, and South Africa visited FCDA to study United States evacuation plans and the national civil defense program. All were given briefings on defense problems raised by thermonuclear weapons and FCDA measures devised to protect United States citizens against nuclear weapons and natural disasters.

In April 1956, Mr. R. C. Chilver, deputy secretary, Cabinet Office of the United Kingdom, visited the United States to discuss civil emergency planning with officials of the Department of State, the Office of Defense Mobilization, and FCDA. At the invitation of FCDA, Mr. Chilver addressed the annual meeting of the National Association of State and Territorial Civil Defense Directors.

Visits by FCDA Officials Abroad

FCDA officials attending NATO working group during the year reviewed civil defense developments and conferred with officials in Belgium, France, Great Britain, and Sweden.

tions of Denmark, The Netherlands, Sweden, and the United Kingdom, and met with civil defense and other government officials in those countries. The Special Advisor to the Administrator inspected civil defense in Denmark, Norway, Portugal, and Sweden. These visits and studies developed the following conclusions:

Many European countries are taking a new look at their civil defense plans and are revising them in light of nuclear warfare. Better balance between shelter and evacuation is being sought because of the danger of radioactive fallout from thermonuclear weapons.

Small European countries with little room for tactical or permanent dispersal are stressing deep public shelters as a major protection device.

There was a notable increase in the tendency of some countries to train specific civil defense forces, these to be organized as mobile columns or independent civil defense corps available exclusively for civil defense emergency duty.

In smaller countries, need for highly trained, well organized forces under control of the central government to back up local volunteer civil defense elements in areas of greatest need was indicated.

Great Britain devoted a great deal of study and conducted one exercise to test military support of civil authorities in event of nuclear attack.

Public participation in and governmental support of civil defense in many Western European countries are ahead of the United States.

Populations of several European countries voluntarily voted themselves a civil defense obligation under law, making it mandatory on everyone between the ages of 16 and 65 to take a prescribed number of hours of civil defense training each year.

